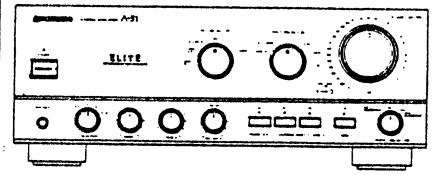
PIONEER®
The Art of Entertainment

Service Manual



ORDER NO.
ARP2251

STEREO AMPLIFIER

A-51
A-777
A-878

A−51, A−777 AND A−878 HAVE THE FOLLOWING :

Type	Model			Power Requirement	Remarks
	A−51	A−777	A−878		
KU	○	—	—	AC120V only	
HE	—	○	—	AC220V−230V, AC240V (switchable)*	
HB	—	○	—	AC220V−230V, AC240V (switchable)*	
SD	—	○	—	AC110V, 120V−127V, 220V, 240V (switchable)	
HEWZ	—	○	—	AC220V−230V, AC240V (switchable)*	
HEZ	—	—	○	AC220V−230V, AC240V (switchable)*	

* Change the position of the fuses.

- **This manual is applicable to the A−51/KU, A−777/HE, HB, SD, HEWZ and A−878/HEZ types.**
- **As to the A−777/HE, HB, SD, HEWZ and A−878/HEZ types, refer to pages 35−39.**

CONTENTS

1. SAFETY INFORMATION 2
2. SPECIFICATIONS 3
3. EXPLODED VIEWS, PACKING AND PARTS LIST 4
4. SCHEMATIC DIAGRAM 9
5. P.C.BOARDS CONNECTION DIAGRAM 15
6. PCB's PARTS LIST 29
7. FOR A−777/HE, HB, SD, HEWZ AND A−878/HEZ TYPES 35
8. PANEL FACILITIES 40
9. ADJUSTMENTS 42

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 9120 Beveren, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

© PIONEER ELECTRONIC CORPORATION 1991

YX MAY 1991

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

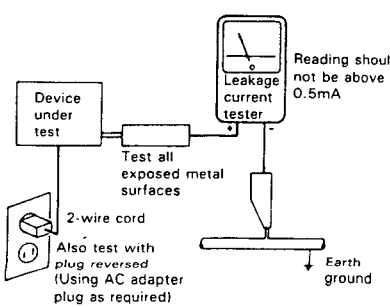
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

A-51

2. SPECIFICATIONS

[A-51/A-777]

Continuous Average Power Output is 100 Watts* per channel, min., at 8 ohms from 20 Hertz to 20,000 Hertz, with no more than 0.007% total harmonic distortion.**
Continuous Average Power Output is 135 Watts* per channel, min., at 4 ohms from 20 Hertz to 20,000 Hertz, with no more than 0.009% total harmonic distortion.**

*** Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers.

Continuous power output (both channels driven at 20 Hz to 20 kHz)**
U.K. model
T.H.D. 0.007 %, 8 Ω ..... 95 W + 95 W*
T.H.D. 0.009 %, 4 Ω ..... 140 W + 140 W*
Multi-voltage models
T.H.D. 0.007 %, 8Ω ..... 100 W + 100 W*
T.H.D. 0.009 %, 4Ω ..... 140 W + 140 W*
DIN Continuous power output (both channels driven at 1 kHz)
T.H.D. 1.0 %, 8 Ω ..... 100 W + 100 W
T.H.D. 1.0 %, 4 Ω ..... 150 W + 150 W
Power bandwidth
0.05 %, 8 Ω ..... 5 Hz – 80 kHz*
Damping factor
(1 kHz/20 Hz to 20 kHz), 8 Ω 150/70
Dynamic power output (on EIA dynamic test signal)
4 Ω/2 Ω ..... 220 W/350 W
Total harmonic distortion**
U.K. model
20 Hz to 20 kHz, 95 W, 8 Ω ..... 0.007 %*
20 Hz to 20 kHz, 140 W, 4 Ω ..... 0.009 %*
Multi-voltage model
20 Hz to 20 kHz, 100 W, 8 Ω ..... 0.007 %*
20 Hz to 20 kHz, 140 W, 4 Ω ..... 0.009 %*
Inter-modulation distortion (at rated output) ..... 0.007 %*
Input sensitivity/impedance
PHONO (MM) ..... 2.5 mV/50 kΩ
PHONO (MC) ..... 0.2 mV/100 Ω
CD, TUNER, LINE, TAPE ..... 150 mV/50 kΩ
PHONO overload level
1 kHz, T.H.D. 0.008 % (MM/MC) ..... 200 mV/19 mV
Output level/impedance
TAPE REC, ADAPTOR OUTPUT ..... 150 mV/2.2 kΩ
Frequency response
PHONO (MM), 20 Hz to 20 kHz ..... ± 0.2 dB
PHONO (MC), 20 Hz to 20 kHz ..... ± 0.3 dB
CD, TUNER, LINE, TAPE, 1 Hz to 150 kHz ..... ± 1 dB*
Tone control (volume control set at – 40 dB position)
BASS ..... ± 8 dB (100 Hz)
TREBLE ..... ± 8 dB (10 kHz)
MUTING ..... – ∞
Loudness contour (volume control set at – 40 dB position)
..... +5 dB (100 Hz)/+3 dB (10 kHz)
Filter (SUBSONIC) ..... 17 Hz (12 dB/oct.)
Signal-to-Noise ratio (IHF short circuit, A network)
PHONO (MM, 5 mV input/MC, 0.5 mV input) ..... 94 dB/76 dB*
CD, TUNER, LINE, TAPE ..... 110 dB*
Signal-to-Noise ratio (DIN, continuous power/50 mW)
PHONO (MM) ..... 74 dB/68 dB*
CD, TUNER, LINE, TAPE ..... 92 dB/70 dB*

Power Supply/Miscellaneous

Power requirements
U.S. model ..... AC 120 V, 60 Hz
U.K. model ..... a.c. 240 Volts –, 50/60 Hz
Multi-voltage models ..... AC 110/120 – 127/220/240 V (switchable), 50/60 Hz
Power consumption
U.S. model ..... 500 W
U.K. model ..... 820 W
Multi-voltage models ..... 820 W
AC outlets (U.S. and Multi-voltage models)
Switched (x 2) ..... 100 W
Unswitched (x 1) ..... 100 W
Dimensions ..... 420 (W) x 435 (D) x 162 (H) mm
16-9/16 (W) x 17-1/8 (D) x 6-3/8 (H) in
Weight (without package) ..... 19 kg (41 lbs 14 oz)

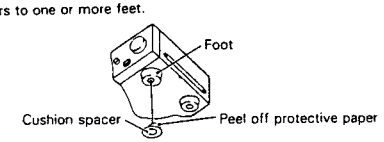
Accessories

Operating instructions 1
Cushion spacer set 1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

* When the DIRECT button to ON.
** Measured by Audio Spectrum Analyzer.

Be sure to place the unit on a level surface so that it stands firmly on all its feet. If wobbly, adjust by attaching the supplied cushion spacers to one or more feet.



Published by Pioneer Electronic Corporation.
Copyright © 1991 Pioneer Electronic Corporation.
All rights reserved.

3. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:

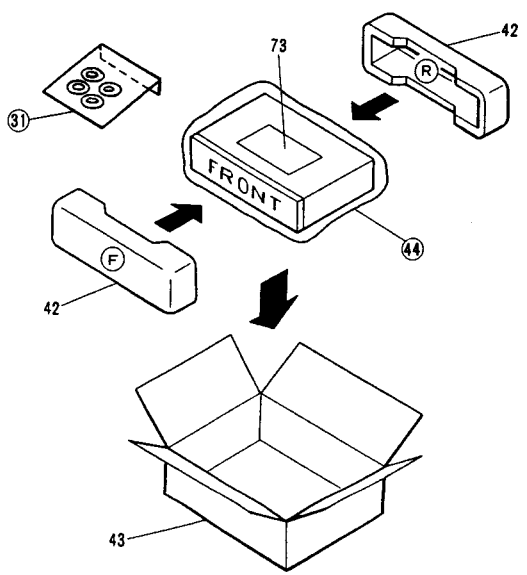
- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts list of Exterior and Packing

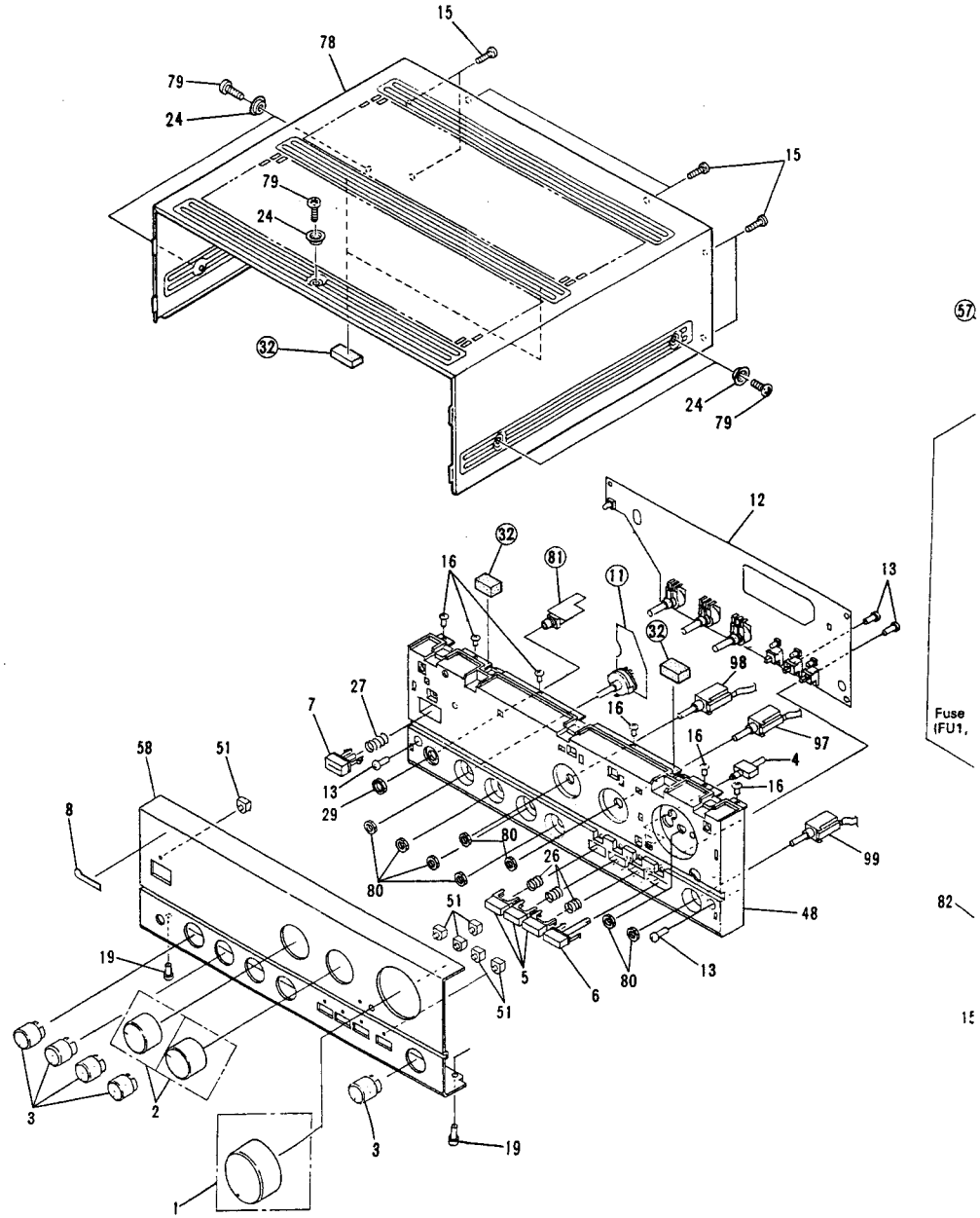
Mark	No.	Description	Parts No.
	1	ROTARY KNOB L (VOLUME)	AAB1222
	2	ROTARY KNOB M (REC SELECTOR, INPUT SELECTOR)	AAB1223
	3	ROTARY KNOB S (SPEAKERS, BASS, TREBLE, BALANCE, PHONO SELECTOR)	AAB1224
	4	KNOB (MUTING)	AAD1016
	5	PUSH KNOB (PHONO EQ, LOUDNESS, ADPT1/TAPE3)	AAD1536
	6	DIRECT KNOB	AAD1560
	7	POWER KNOB	AAD2010
	8	NAME PLATE (METAL)	AAM1029
	9	REC OUT ASSEMBLY	
	10	INPUT SELECTOR ASSEMBLY	
	11	SPEAKER SWITCH ASSEMBLY	
⊙	12	TONE AMP ASSEMBLY	AWZ3444
	13	SCREW	ABA−298
	14	SCREW (STEEL)	ABA1004
	15	SCREW (STEEL)	ABA1009
	16	SCREW (STEEL)	ABA1011
	17	SCREW	ABA1034
	18	SCREW (STEEL)	ABA1047
	19	SCREW (STEEL)	ABA1048
	20	SCREW (STEEL)	ABA1050
	21	SCREW	ABA1056
	22	SCREW	ABA1082
	23	SCREW	ABA1088
	24	WASHER	ABE1009
	25	WASHER	ABF1017
	26	SPRING	ABH1034
	27	COIL SPRING A	ABH1056
	28	FLANGE NUT M9	ABN−048
	29	NUT	ABN−065
⚠	30	AC POWER CORD	ADG1058
	31	SPACER SET	
	32	CUSHION C (RUBBER)	
	33	NYLON BINDER	
	34	PCB HOLDER	
	35	NYLON RIVET	AEC1160
	36	SPACER	
	37	MICA SHEET	AEE1014
	38	SPACER	
	39	TAPE	
	40	STRAIN RELIEF	AEP−113
	41	CLAMPER	
	42	STYROL PROTECTOR	AHA1070
	43	PACKING CASE	AHD2068
	44	PACKING SHEET	
	45	TERMINAL SCREW	
	46	JUMPER PLUG	AKM1019
⚠	47	AC SOCKET 3−P	AKP−515
	48	PANEL BASE	AMB1799
	49	FOOT	AMR1158
	50	FOOT	AMR1159
	51	INDICATING LENS	AMR1160
	52	JOINT	AMR1178
	53	PUSH JOINT	
	54	HEAT SINK HOLDER F	
	55	HEAT SINK HOLDER R	
	56	RIGHT FRAME	
	57	TRANS. FRAME	
	58	FRONT PANEL	ANB1457
	59	REAR PANEL	
	60	PANEL STAY	
⊙	61	POWER SUPPLY ASSEMBLY	AWZ3425
	62	BOTTOM PLATE	
	63	VOLUME HOLDER	
	64	CORD PLATE	
	65	VOLUME ASSEMBLY HOLDER	
	66	POWER ASSEMBLY HOLDER (F)	
	67	POWER ASSEMBLY HOLDER (R)	
	68	EARTH PLATE	
	69	TRANSISTOR HOLDER	
	70	HEAT SINK	

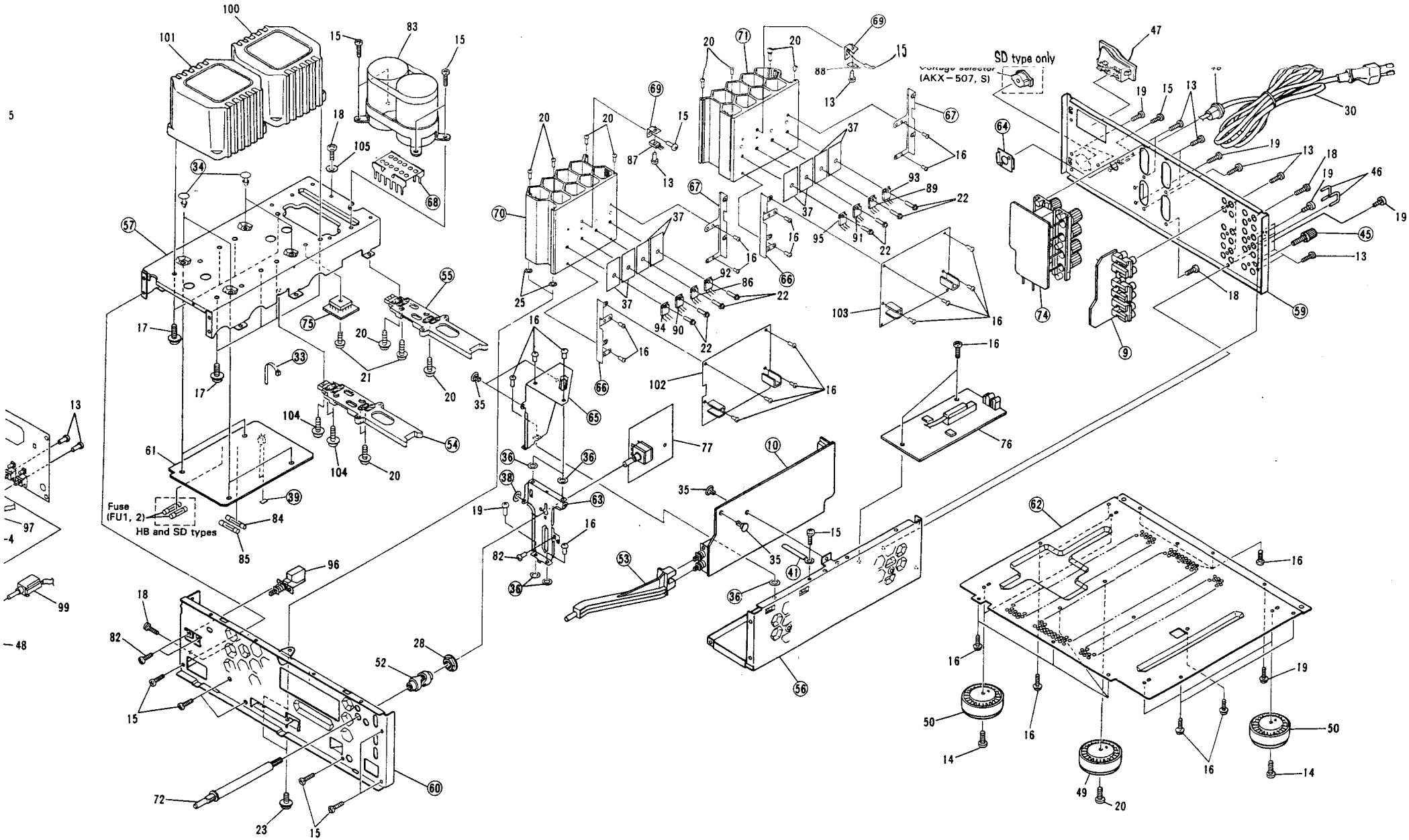
Mark	No.	Description	Parts No.
	71	HEAT SINK	
	72	LONG SHAFT ASSEMBLY	ANL1039
	73	OPERATING INSTRUCTIONS (English, Spanish)	ARE1204
	74	SPEAKER TERM. ASSEMBLY	
	75	DIODE ASSEMBLY	
⊙	76	PHONO AMP ASSEMBLY	AWZ3434
⊙	77	VR ASSEMBLY	AWZ3439
	78	METAL BONNET	AZN1804
	79	SCREW	BBZ40P080FZK
	80	NUT	NK90FCU
	81	HEAD PHONE ASSEMBLY	
	82	SCREW	VMZ30P060FCU
⚠	83	ELECTROLYTIC CAPACIT (C1)	ACH1193
⚠	84	FUSE (4A, FU3)	AEK−125
⚠	85	FUSE (4A, FU4)	AEK−125
⚠	86	TRANSISTOR (Q1)	2SC3182N
⚠	87	TRANSISTOR (Q155)	2SC4137
⚠	88	TRANSISTOR (Q156)	2SC4137
⚠	89	TRANSISTOR (Q2)	2SC3182N
⚠	90	TRANSISTOR (Q3)	2SA1265N
⚠	91	TRANSISTOR (Q4)	2SA1265N
⚠	92	TRANSISTOR (Q5)	2SC3182N
⚠	93	TRANSISTOR (Q6)	2SC3182N
⚠	94	TRANSISTOR (Q7)	2SA1265N
⚠	95	TRANSISTOR (Q8)	2SA1265N
⚠	96	PUSH SWITCH (S1)	ASG−553
	97	SWITCH (S2)	ASU1039
	98	SWITCH (S3)	ASU1038
	99	SWITCH (S4)	ASU1026
⚠	100	POWER TRANSFORMER (T1)	ATS1348
⚠	101	POWER TRANSFORMER (T2)	ATS1348
⊙	102	POWER L ASSEMBLY	AWZ3417
⊙	103	POWER R ASSEMBLY	AWZ3420
	104	SCREW	ABA1129
	105	WASHER	ABE−053

• Packing

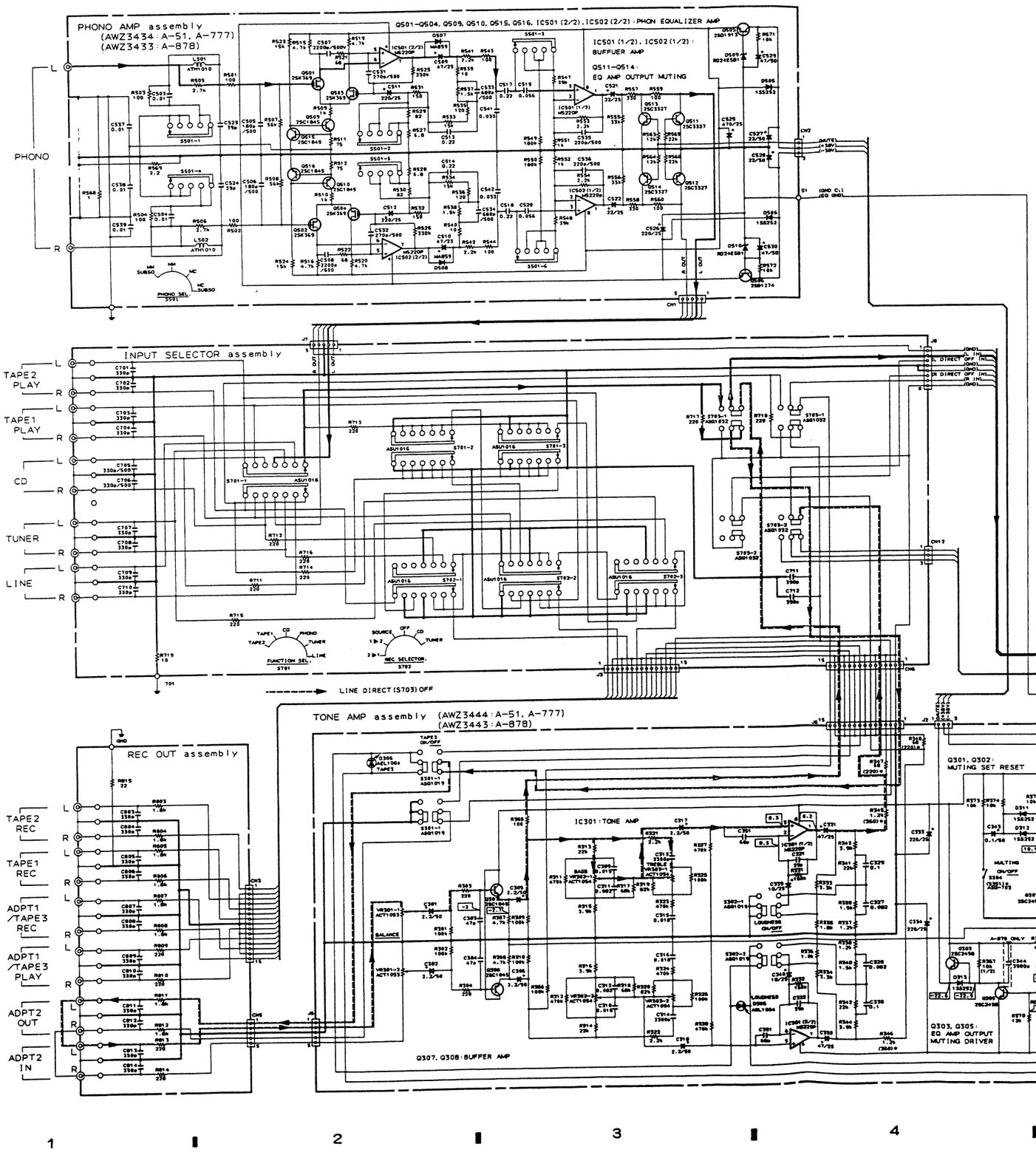


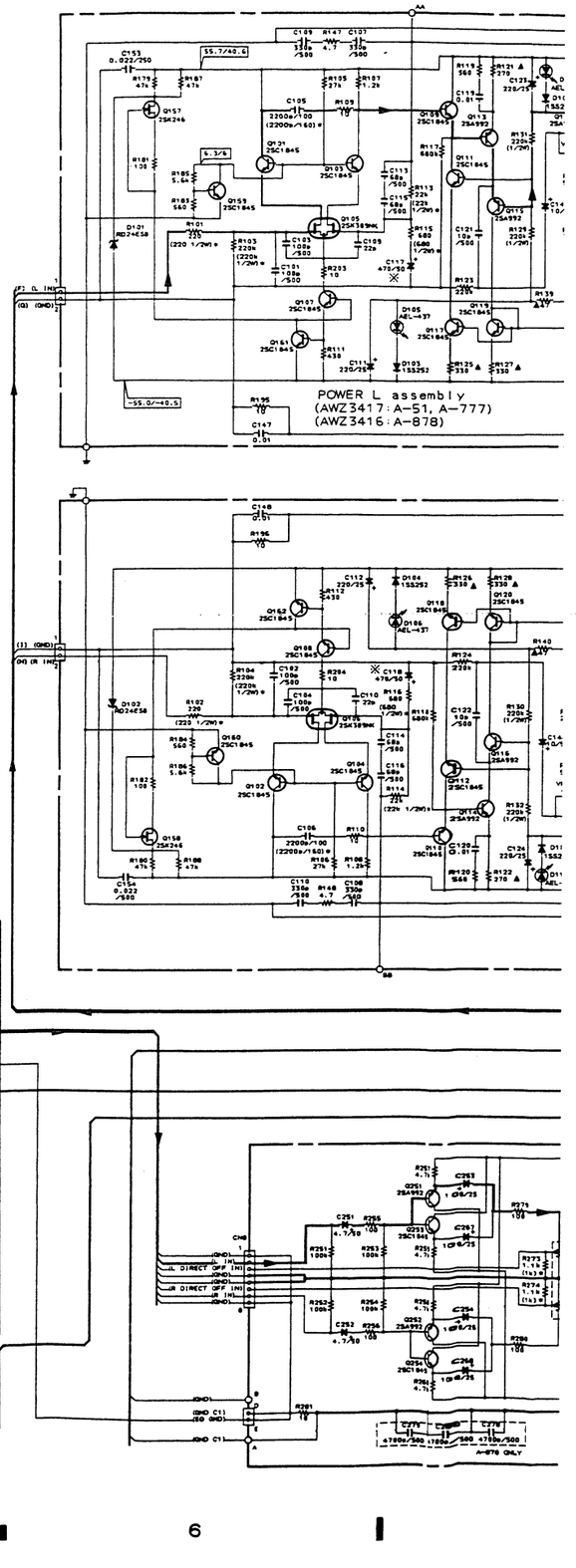
• Exterior




SD type only
(AKX-507, S)
Fuse
(FU1, 2)
HB and SD types

4. SCHEMATIC DIAGRAM





POWER L assembly
(AWZ3417: A-51, A-777)
(AWZ3416: A-878)

VR assembly (1/2) (AWZ3439: A-51, A-777)
(AWZ3438: A-878)

SPEAKER TERM. assembly

SP-A

SP-B

SPEAKER SWITCH assembly

HEAD PHONE assembly

POWER R assembly (AWZ3420: A-51, A-777)
(AWZ3419: A-878)

DIODE assembly

POWER TRANSFORMER
T1 ATS1348

POWER TRANSFORMER
T2 ATS1348

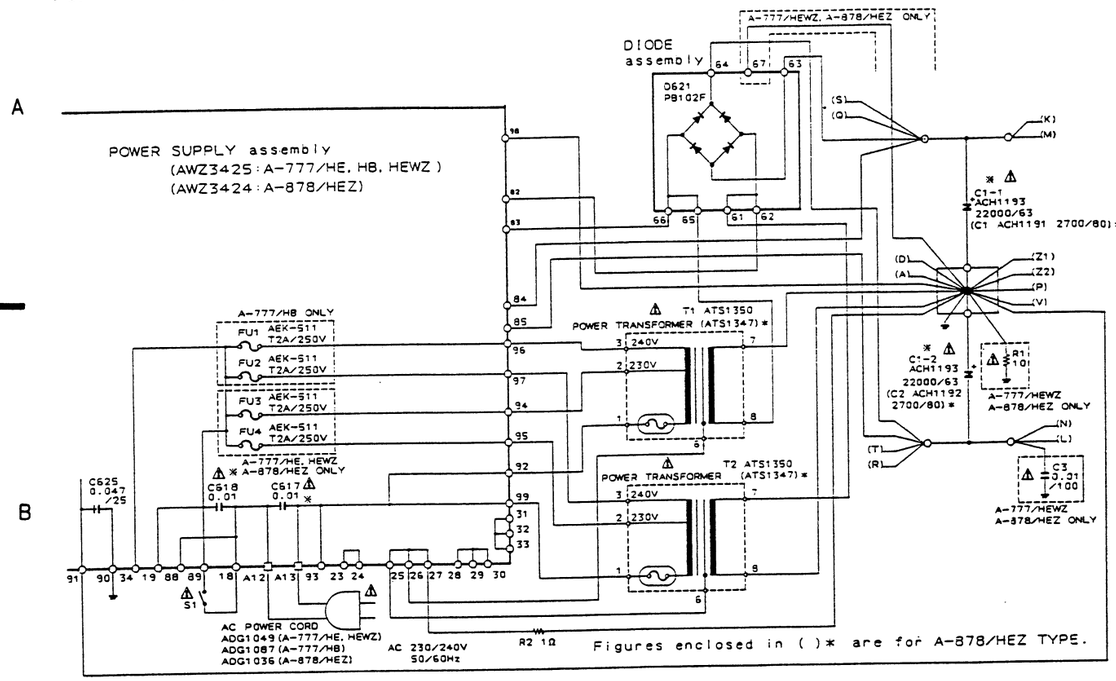
POWER SUPPLY assembly
(AWZ3425: A-51, A-777)
(AWZ3424: A-878)

VR assembly (2/2) (AWZ3439 A-51, A-777)
(AWZ3438 A-878)

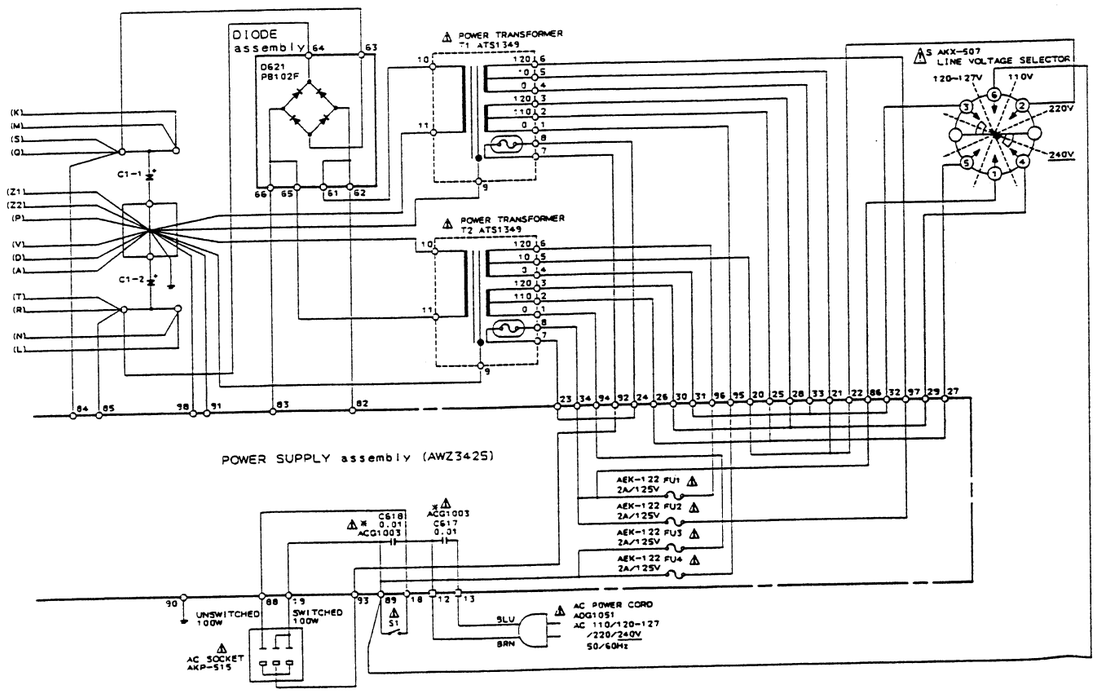
Figures enclosed in ( )* are for A-878/HEZ TYPE

■ POWER SUPPLY SECTION

• For A−777/HE, HB, HEWZ and A−878/HEZ types



• For A−777/SD type



1. RESISTORS:
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
▭ : Signal voltage at (W + W 8Ω)output (1kHz)
▭ : DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power.
⇦ mA : DC current at no input signal

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

SWITCHES:

S1 POWER SW
S2 LINE VOLTAGE SELECTOR (A-777/SD ONLY)

TONE AMP assembly
S301 TAPE3 ON/OFF
S302 LOUDNESS ON/OFF
S303 EQ POWER ON/OFF
S304 MULTING ON/OFF (A-51,A-777 ONLY)
S351 MULTING ON/OFF (A-878 ONLY)

SPEAKER SWITCH assembly
S401 SPEAKER A,B(OFF/A/B/A+B)

INPUT SELECTOR assembly
S701 INPUT SELECTOR
S702 REC SELECTOR
S703 DIRECT

PHONO AMP assembly
S501 PHONO SELECTOR

LINE VOLTAGE SELECTION
(For A−777/HE, HB ,HEWZ and A−878/HEZ types.)

Line voltage can be changed with the following steps.

1. Disconnect the AC Power cord.
2. Remove the top cover.
3. Change the position of the fuses as follows.

Voltage	Fuse Position
230V 240V	FU3 and 4 FU1 and 2

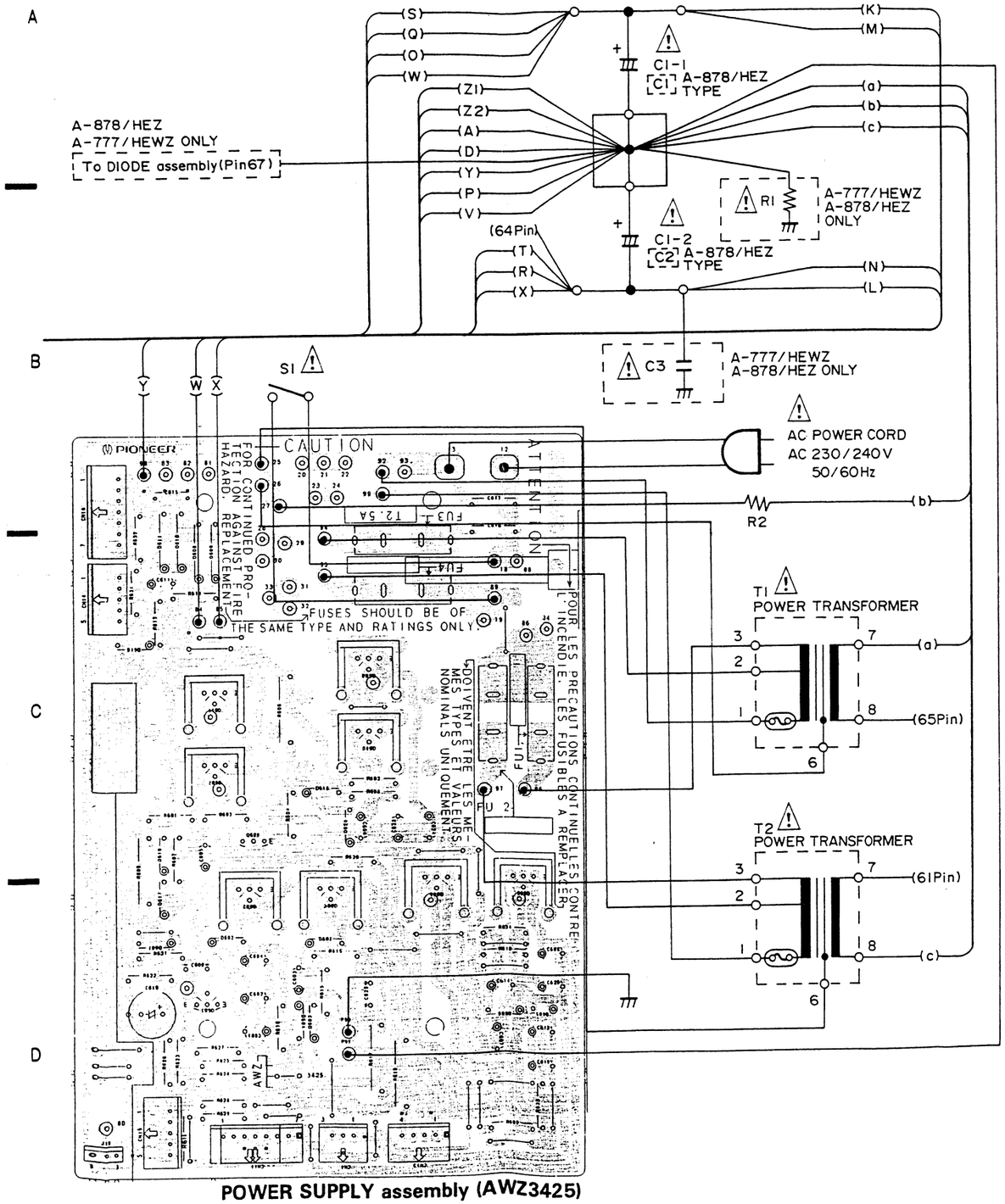
4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX−193	220V label
AAX−192	240V label

5. P.C.BOARDS CONNECTION DIAGRAM

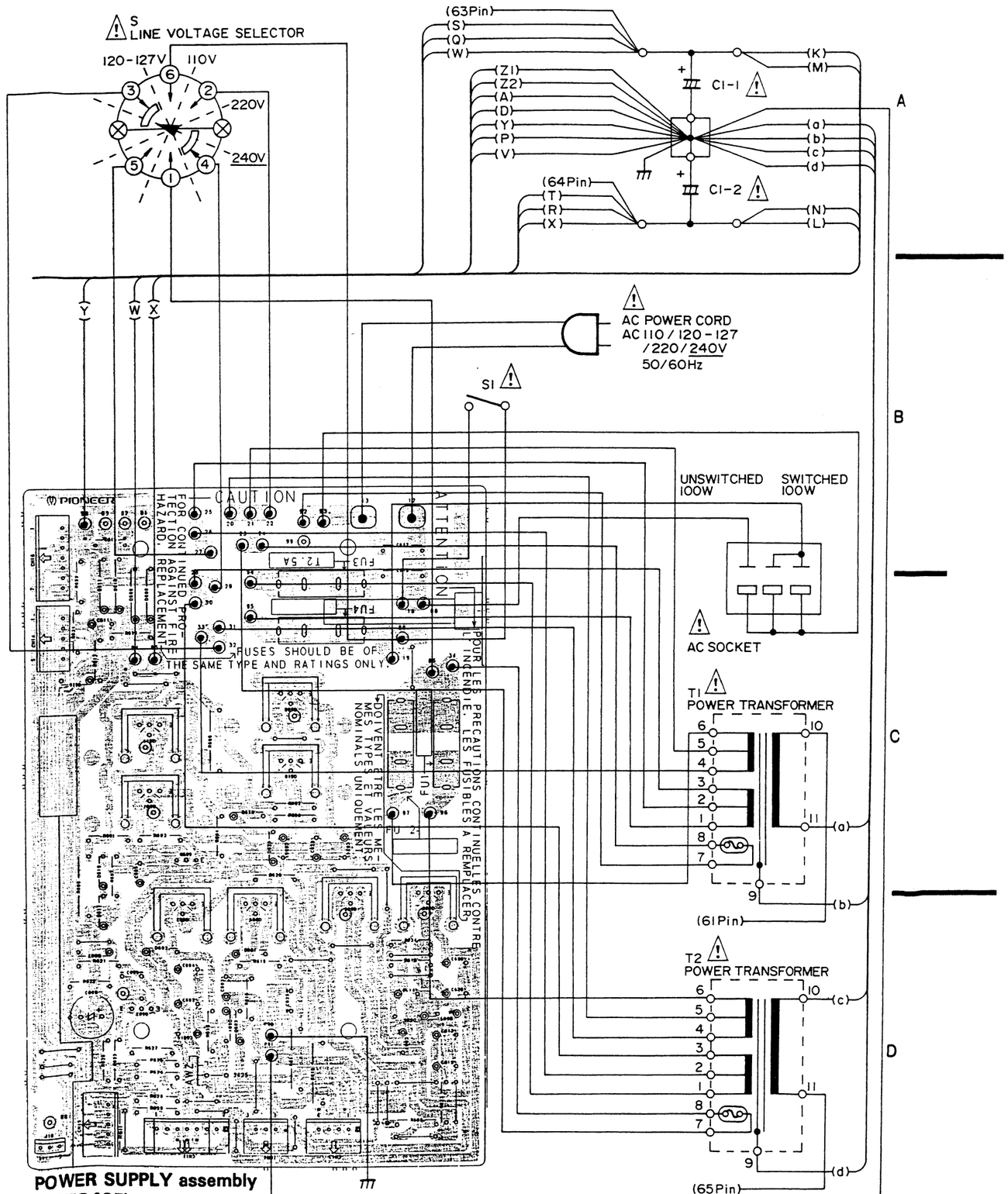
■ POWER SUPPLY SECTION

• For A−777/HE, HB, HEWZ and A−878/HEZ types

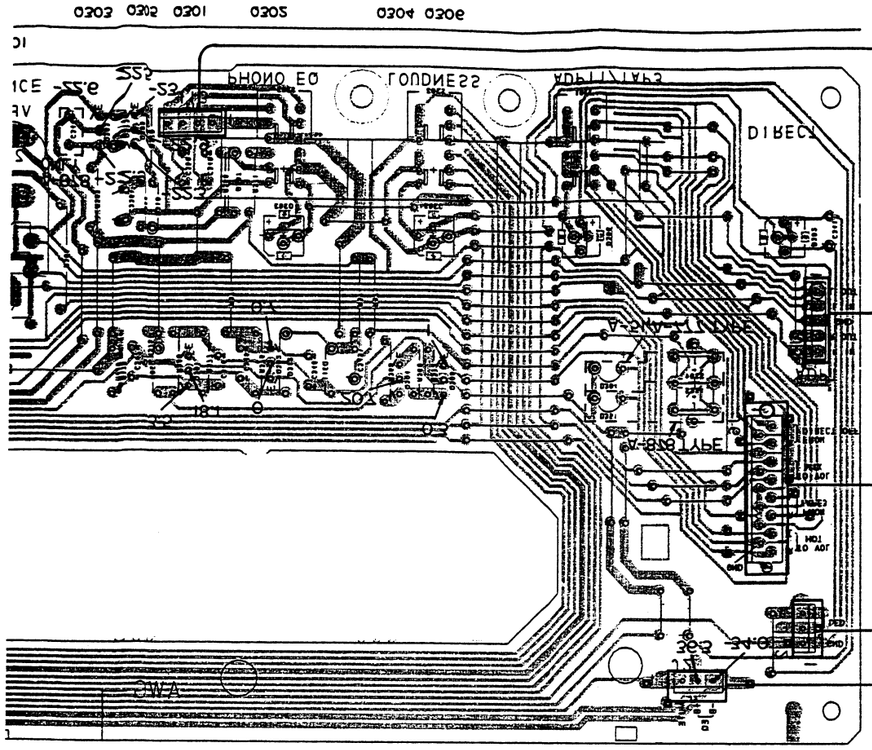


POWER SUPPLY assembly (AWZ3425)

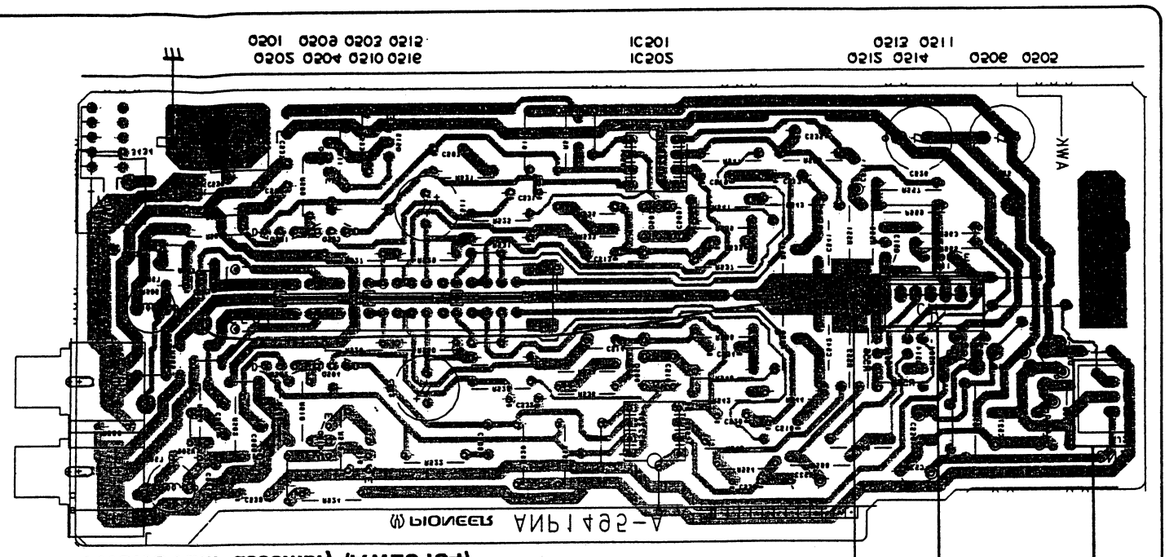
• For A−777/SD type

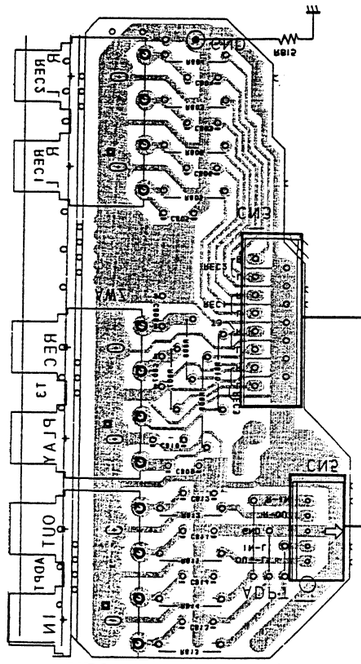


POWER SUPPLY assembly (AWZ3425)

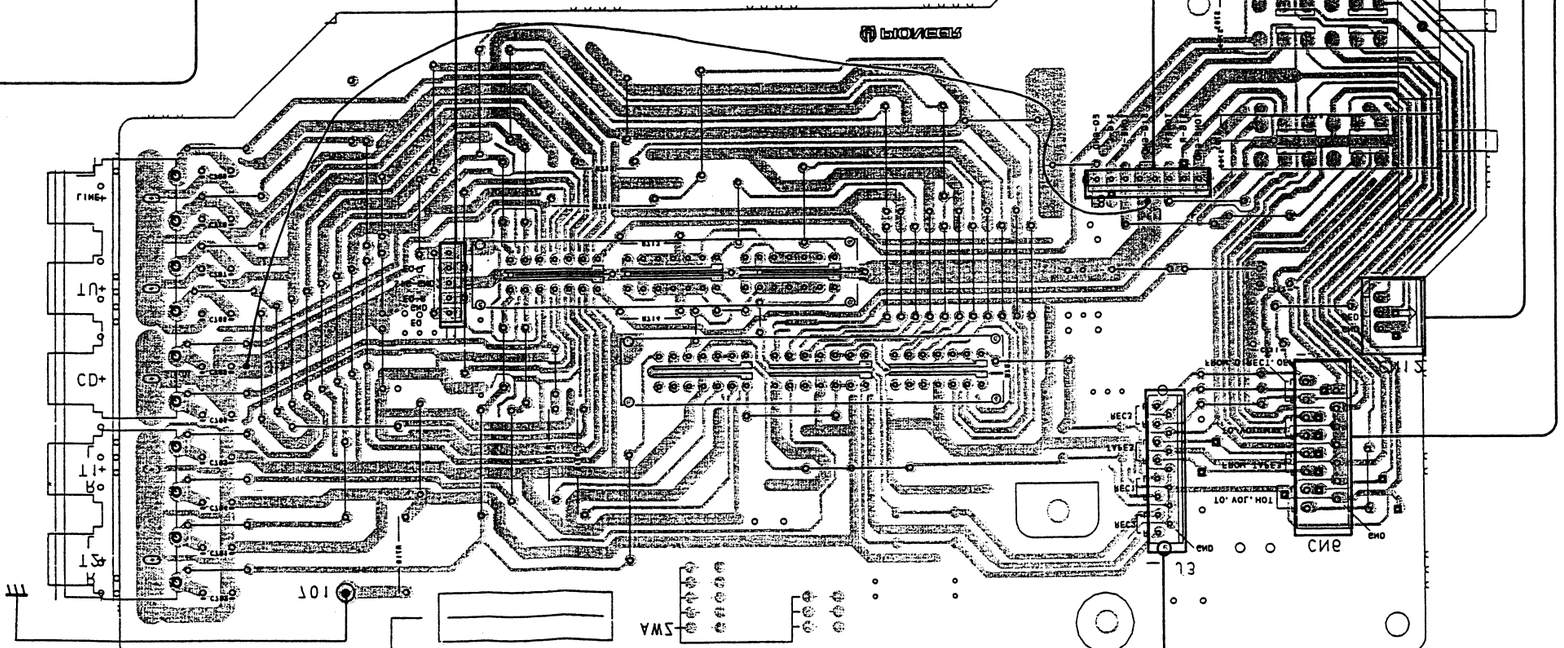


PHONO AMP assembly (AWZ3434)





REC OUT assembly



INPUT SELECTOR assembly

This P.C.B. connection diagram is viewed from the foil side.

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

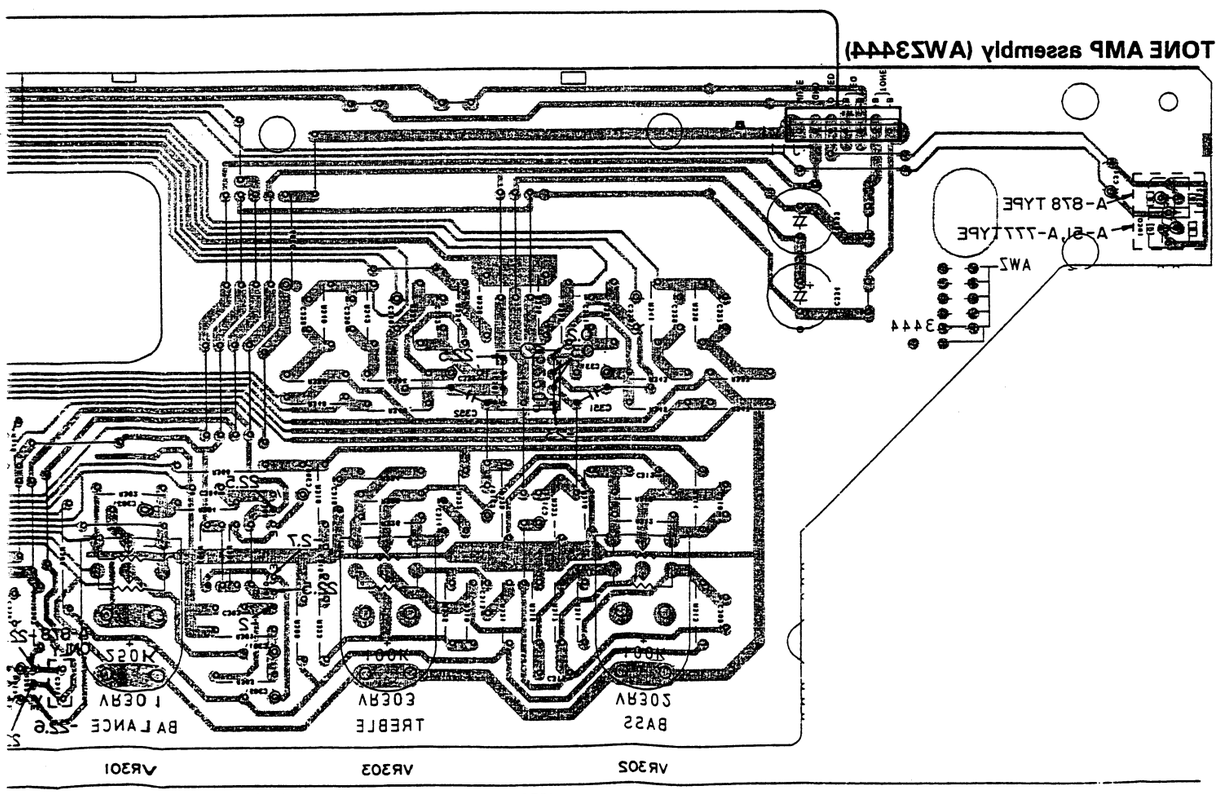
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
0504 E C B	or	Transistor
0215 C B E	or	Radiator type transistor
0203	D203	Diode
R237	R237	Resistor
C513		Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

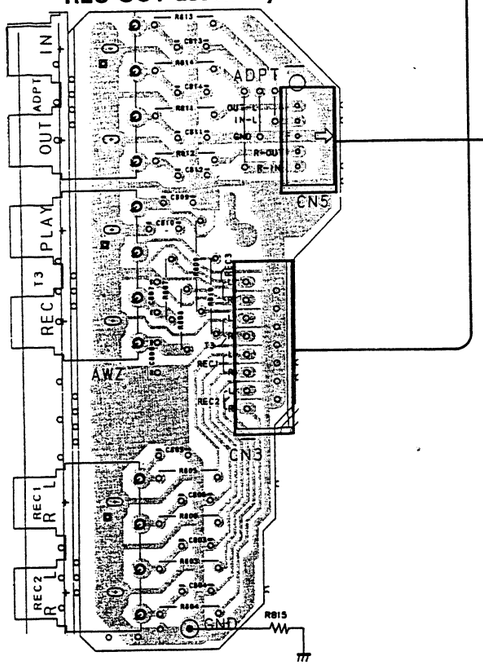
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

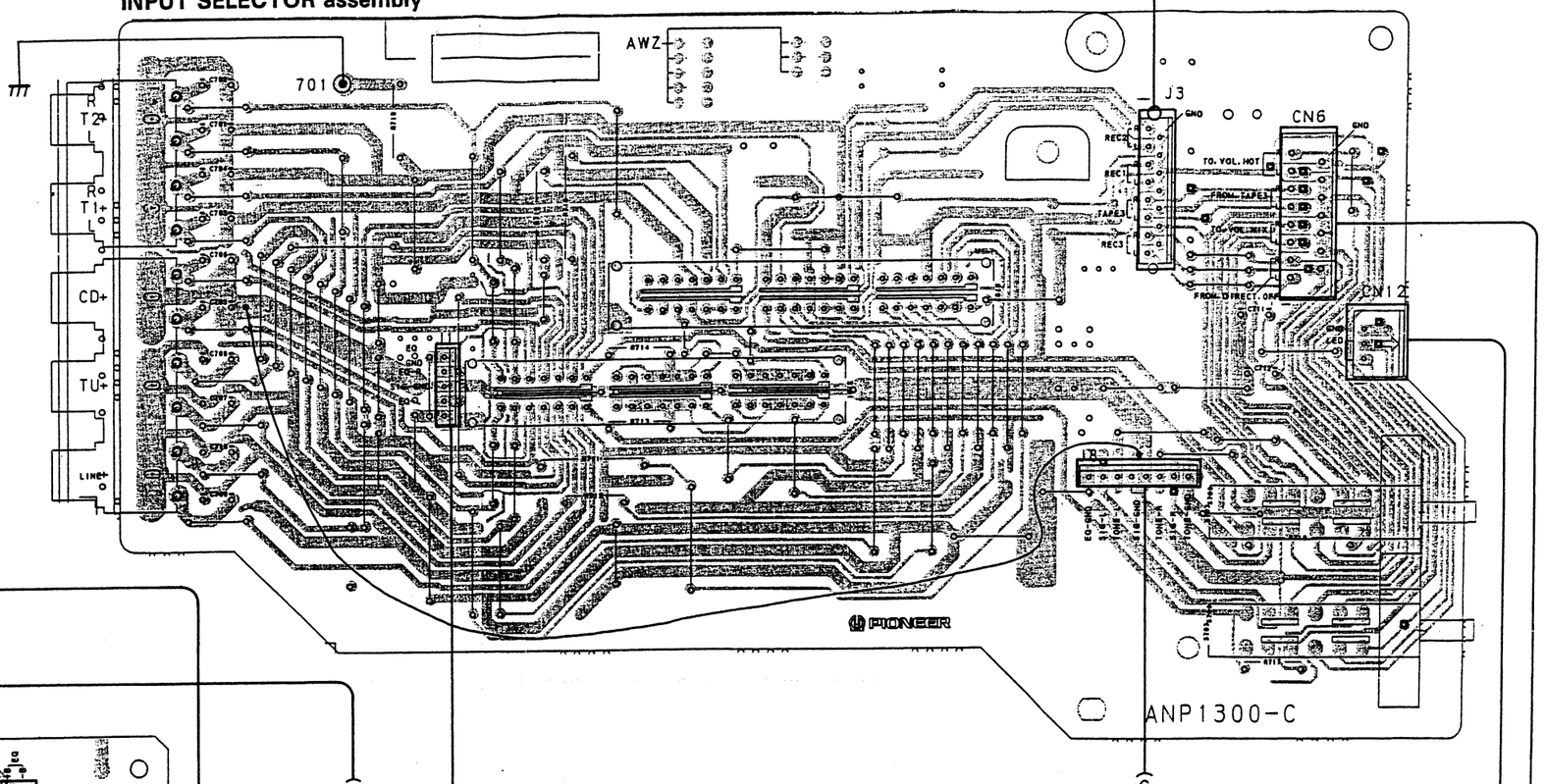
TONE AMP assembly (AWZ3444)

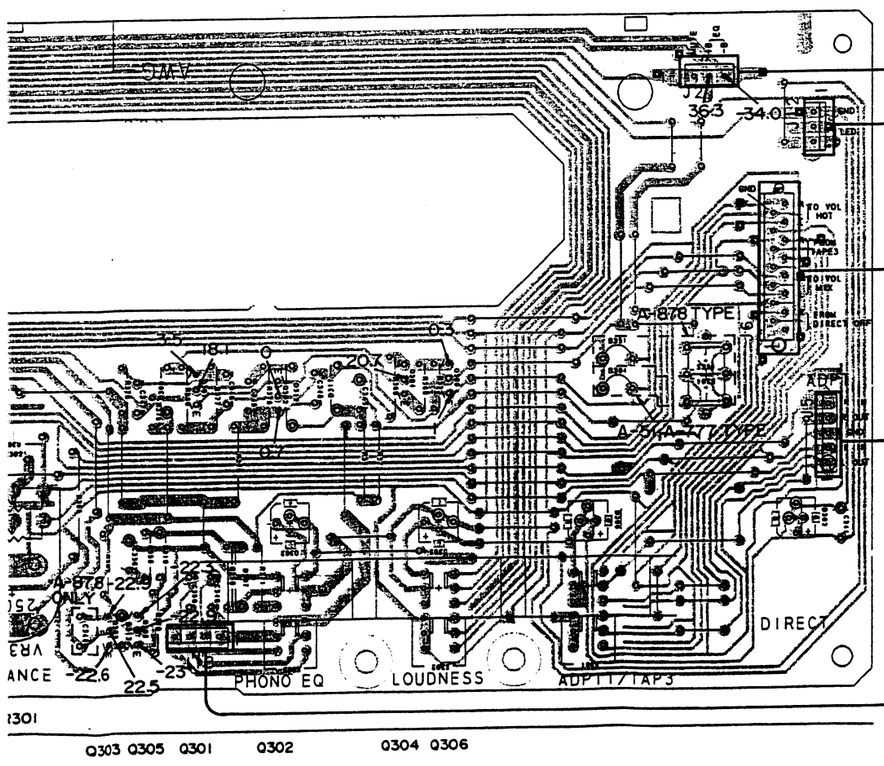


REC OUT assembly

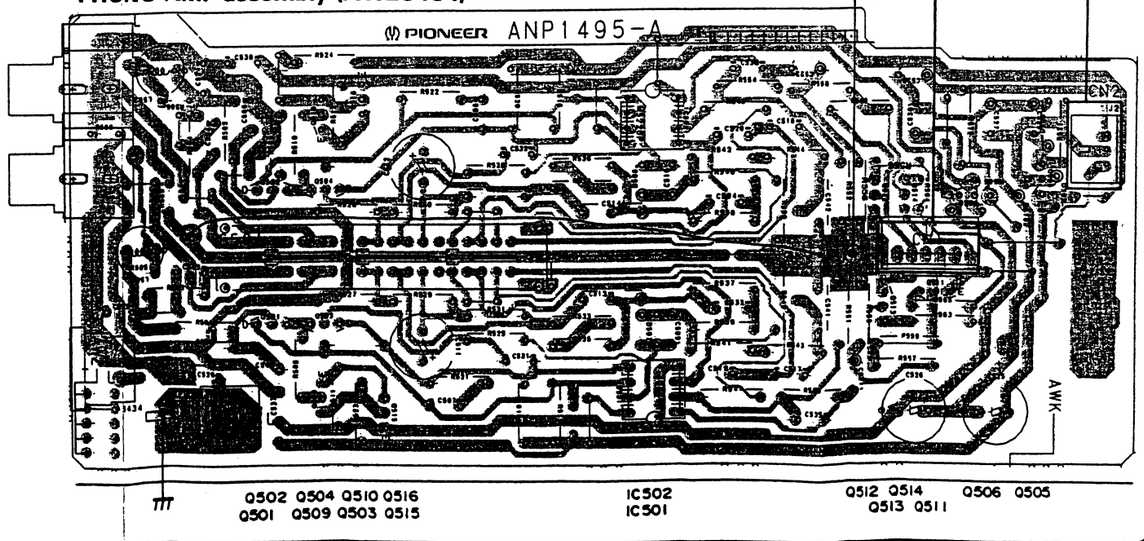


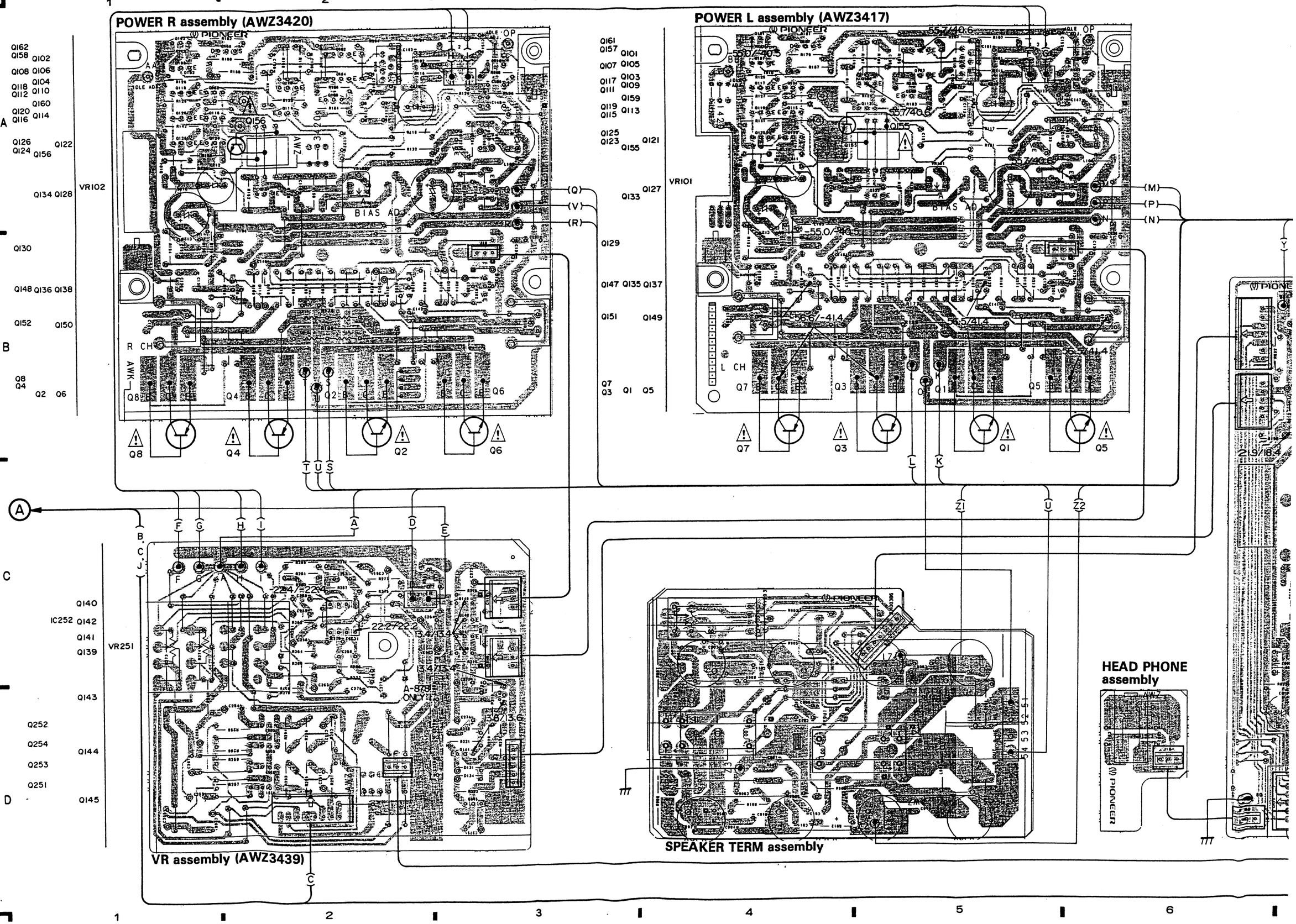
INPUT SELECTOR assembly

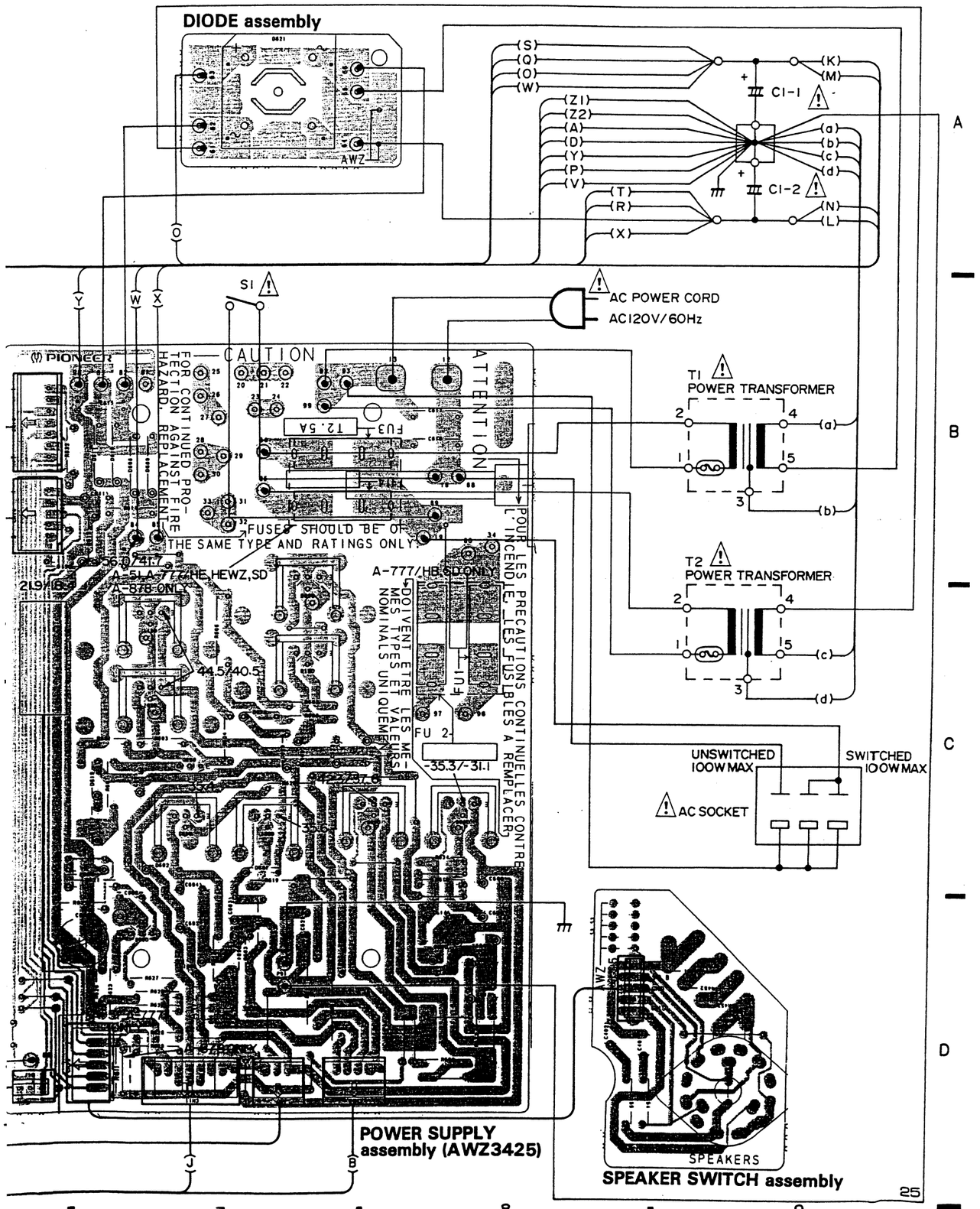


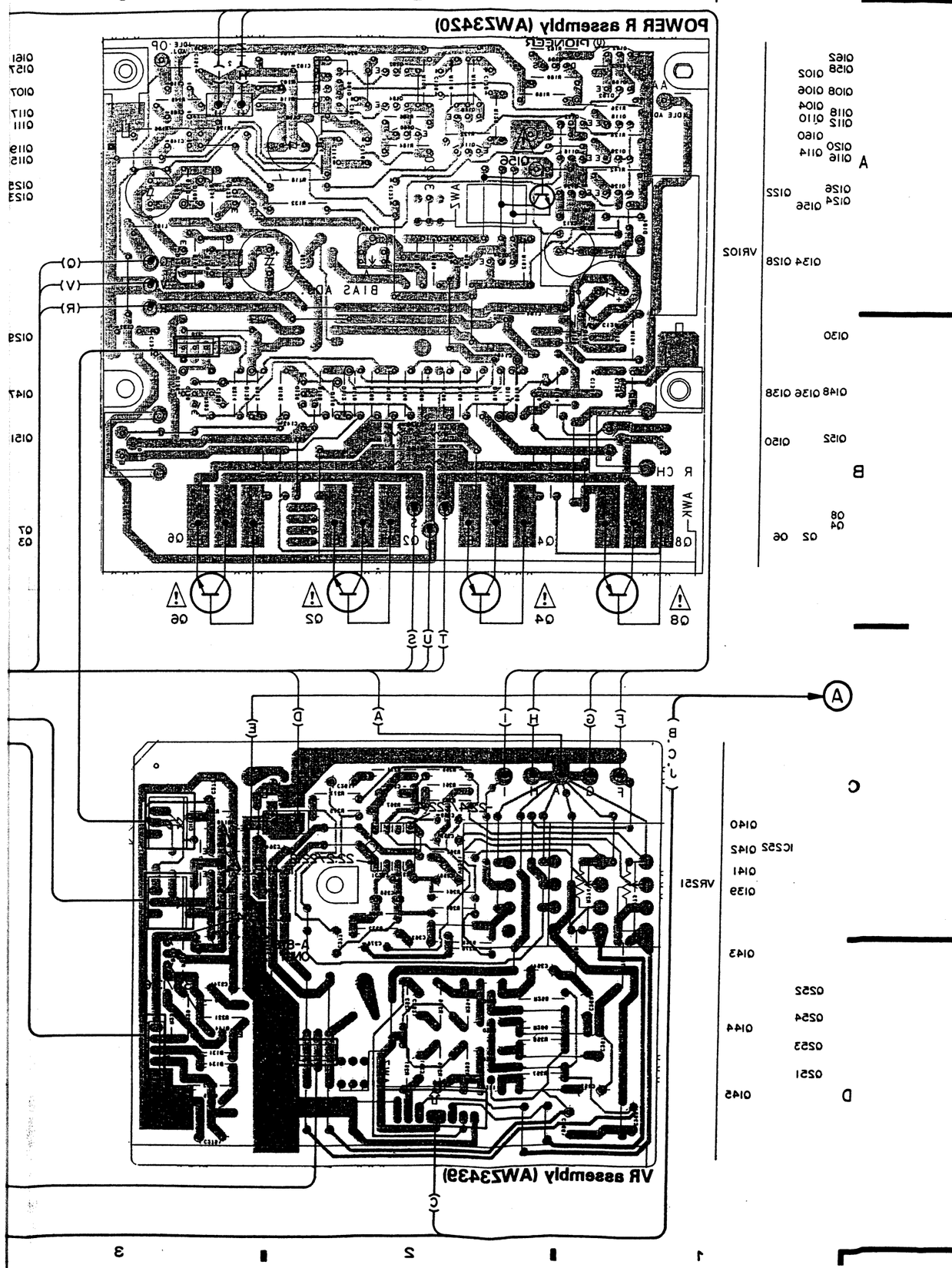


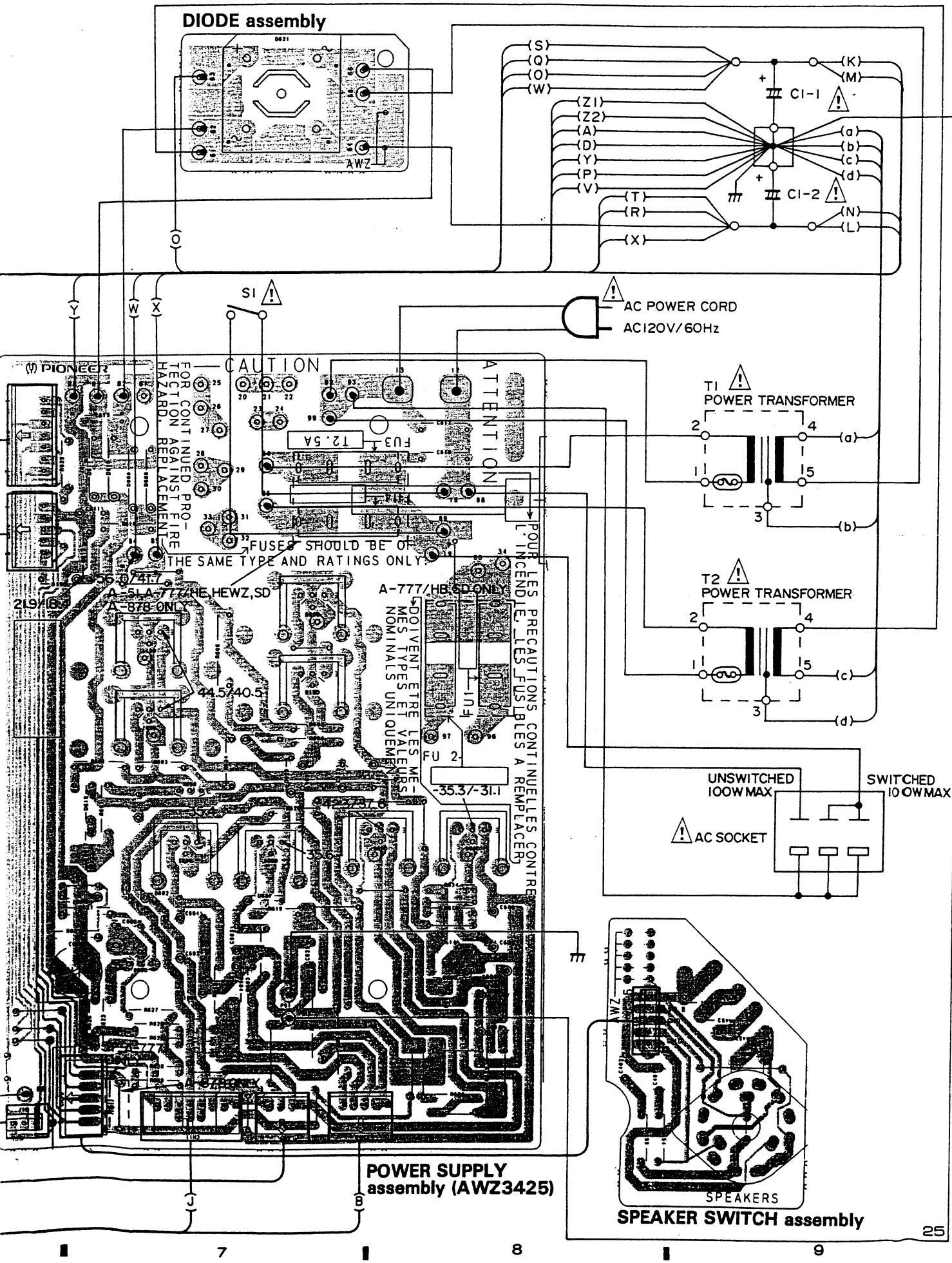
PHONO AMP assembly (AWZ3434)




POWER R assembly (AWZ3420)
POWER L assembly (AWZ3417)
VR assembly (AWZ3439)
SPEAKER TERM assembly
HEAD PHONE assembly
Q162 Q158 Q102
Q108 Q106
Q118 Q104
Q112 Q110
Q160
Q120 Q114
Q116
Q126 Q122
Q124 Q156
Q134 Q128 VR102
Q130
Q148 Q136 Q138
Q152 Q150
Q8 Q4 Q2 Q6
Q161 Q157 Q101
Q107 Q105
Q117 Q103
Q111 Q109
Q159
Q119 Q113
Q115
Q125 Q123 Q155 Q121
Q127
Q133
Q129
Q147 Q135 Q137
Q151 Q149
Q7 Q3 Q1 Q5
VR101
Q140
IC252 Q142
Q141
Q139 VR251
Q143
Q252
Q254 Q144
Q253
Q251
Q145
R CH
L CH
BIAS ADJ
(Q)
(V)
(R)
(M)
(P)
(N)
Y
Z1
Z2
U
T
S
L
K
Z3
Z4
Z5
Z6
Z7
Z8
Z9
Z10
Z11
Z12
Z13
Z14
Z15
Z16
Z17
Z18
Z19
Z20
Z21
Z22
Z23
Z24
Z25
Z26
Z27
Z28
Z29
Z30
Z31
Z32
Z33
Z34
Z35
Z36
Z37
Z38
Z39
Z40
Z41
Z42


DIODE assembly
AWZ
(S)
(Q)
(O)
(W)
(Z1)
(Z2)
(A)
(D)
(Y)
(P)
(V)
(T)
(R)
(X)
(K)
(M)
(a)
(b)
(c)
(d)
(N)
(L)
C1-1
C1-2
S1
AC POWER CORD
AC120V/60Hz
T1
POWER TRANSFORMER
T2
POWER TRANSFORMER
FU3 T2.5A
FU1 T4A
FU2 T4A
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATINGS FUSES.
ATTENTION
POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE, LES FUSIBLES A REMPLACER SEULEMENT PAR DES FUSIBLES DE MEMES TYPES ET VALEURS NOMINALS UNIQUEMENT.
FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY.
A-777/HE,HEWZ,SD
A-878 ONLY
A-777/HB,SD ONLY
-35.3/-31.1
44.5/40.5
UNSWITCHED 100W MAX
SWITCHED 100W MAX
AC SOCKET
POWER SUPPLY assembly (AWZ3425)
SPEAKERS
SPEAKER SWITCH assembly
25


POWER R assembly (AWZ3420)
PIONEER
BIAS ADJ
R CH
AWK
VR102
VR251
VR assembly (AWZ3439)


DIODE assembly
AWZ
(S)
(Q)
(O)
(W)
(Z1)
(Z2)
(A)
(D)
(Y)
(P)
(V)
(T)
(R)
(X)
(K)
(M)
C1-1
(a)
(b)
(c)
(d)
C1-2
(N)
(L)
SI
AC POWER CORD
AC120V/60Hz
T1
POWER TRANSFORMER
T2
POWER TRANSFORMER
UNSWITCHED
100W MAX
SWITCHED
100W MAX
AC SOCKET
CAUTION
ATTENTION
FUSE SHOULD BE OF THE SAME TYPE AND RATINGS ONLY
POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE, LES FUSIBLES A REMPLACER
T2.5A
FU3
FU1
FU2
A-777/HE,HEWZ,SD
A-878 ONLY
A-777/HB,SD ONLY
POWER SUPPLY
assembly (AWZ3425)
SPEAKERS
SPEAKER SWITCH assembly
25

A-51

This P.C.B. connection diagram is viewed from the foil side.

6. PCB's PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	*56 × 10¹*	*561*	*RD1/4PS 5 6 1 J*
47kΩ	*47 × 10³*	*473*	*RD1/4PS 4 7 3 J*
0.5Ω	*0R5*		*RN2H 0 R 5 K*
1Ω	*010*		*RS1P 0 1 0 K*

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 × 10¹*	*5621*	*RN1/4SR 5 6 2 1 F*

Mark No.	Description	Parts No.
⊙ TONE AMP ASSEMBLY (AWZ3444)		
SEMICONDUCTORS		
IC301	OP−AMP−IC	M5220P
Q301−305	TRANSISTOR	2SC2458
Q306	TRANSISTOR	2SA1048
Q307, 308	TRANSISTOR	2SC1845
D301	LED (RED)	AEL1004
D302	LED	AEL1084
D303	LED (RED)	AEL1004
D304	LED (RED)	AEL1065
D305, 306	LED (RED)	AEL1004
D307	DIODE	1SS252
D308	ZENER DIODE	RD2.0ESB
D309	DIODE	1SS252
D310	ZENER DIODE	RD5.6ESB
D311−313	DIODE	1SS252
SWITCHES		
S301, 302	PUSH SWITCH	ASG1019
S303	PUSH SWITCH	ASG1021
S304	SWITCH	ASG−703
CAPACITORS		
C301, 302	ELECTR.CAPACITOR	CEAS2R2M50
C303, 304	CERAMIC CAPACITOR	CCCSL470J50
C305, 306	ELECTR.CAPACITOR	CEAS2R2M50
C309, 310	AUDIO FILM CAPACITOR	CFTXA153J50
C311, 312	AUDIO FILM CAPACITOR	CFTXA823J50
C313, 314	MYLOR FILM CAPACITOR	CQMA332K50
C315, 316	AUDIO FILM CAPACITOR	CFTXA183J50
C317, 318	ELECTR.CAPACITOR	CEAS2R2M50
C321, 322	CERAMIC CAPACITOR	CCCSL390J50
C327, 328	AUDIO FILM CAPACITOR	CFTXA823J50
C329, 330	AUDIO FILM CAPACITOR	CFTXA104J50
C331, 332	ELECTR.CAPACITOR	CEAS470M25
C333, 334	ELECTR.CAPACITOR	CEAS221M25
C336	ELECTR.CAPACITOR	CEAS221M10
C339, 340	ELECTR.CAPACITOR	CEAS100M25
C341, 342	ELECTR.CAPACITOR	CEAS010M50
C343	ELECTR.CAPACITOR	CEAS0R1M50
C345, 346	CERAMIC CAPACITOR	CKCYF103Z50
C347, 348	CERAMIC CAPACITOR	CKCYB222K50
C349, 350	CERAMIC CAPACITOR	CKCYB392K50
C351, 352	CERAMIC CAPACITOR	CCDSL680J50
RESISTORS		
VR301	VARIABLE RESISTOR	ACT1053
VR302, 303	VARIABLE RESISTOR	ACT1054
R355	CARBON FILM RESISTOR	RD1/8PM101J
R356	CARBON FILM RESISTOR	RD1/8PM224J
R367	CARBON FILM RESISTOR	RD1/2PM103J
R368	CARBON FILM RESISTOR	RD1/8PM103J
R369	CARBON FILM RESISTOR	RD1/8PM682J
R370	CARBON FILM RESISTOR	RD1/8PM123J
R371	CARBON FILM RESISTOR	RD1/8PM473J
R372	CARBON FILM RESISTOR	RD1/8PM182J
R373−375	CARBON FILM RESISTOR	RD1/8PM103J

Mark No.	Description	Parts No.
R376, 377	CARBON FILM RESISTOR	RD1/8PM393J
R378, 379	CARBON FILM RESISTOR	RD1/8PM224J
R380	CARBON FILM RESISTOR	RD1/8PM103J
	Other resistors	RD1/4PM□□□J

SPEAKER SWITCH ASSEMBLY

SWITCH

S401	SWITCH	ASD1003

CAPACITORS

C401, 402	ELECTR.CAPACITOR	CEAS3R3M50

RESISTORS

R451–453	CARBON FILM RESISTOR	RD1/4PM271J
R454, 455	CARBON FILM RESISTOR	RD1/4PM561J

INPUT SELECTOR ASSEMBLY

SWITCHES

S701, 702	SWITCH	ASU1016
S703	PUSH SWITCH	ASG1032

CAPACITORS

C701–704	CERAMIC CAPACITOR	CKDYB331K50
C705, 706	CERAMIC CAPACITOR	CKCYB331K500
C707–710	CERAMIC CAPACITOR	CKDYB331K50
C711, 712	CERAMIC CAPACITOR	CKDYB391K50

RESISTORS

R711, 712	CARBON FILM RESISTOR	RDR1/4PM221J
R713–718	CARBON FILM RESISTOR	RD1/4PM221J
R719	CARBON FILM RESISTOR	RD1/4PM100J

OTHERS

	PIN JACK (4P)	AKB1007
	PIN JACK (6P)	AKB1029
CN6	CONNECTOR (15P)	KPE15

REC OUT ASSEMBLY

CAPACITORS

C803–814	CERAMIC CAPACITOR	CKDYB331K50

RESISTORS

R803–806	CARBON FILM RESISTOR	RD1/4PM182J
R807, 808	CARBON FILM RESISTOR	RD1/8PM182J
R809, 810	CARBON FILM RESISTOR	RD1/8PM221J
R811, 812	CARBON FILM RESISTOR	RD1/4PM182J
R813, 814	CARBON FILM RESISTOR	RD1/4PM221J
R815	CARBON FILM RESISTOR	RD1/4PM220J

OTHERS

	PIN JACK (4P)	AKB1009
CN3	CONNECTOR (15P)	KPE15

⊙ POWER L ASSEMBLY (AWZ3417)

SEMICONDUCTORS

Q101, 103	TRANSISTOR	2SC1845
Q105	N–DUAL–FET	2SK389NK
Q107, 109	TRANSISTOR	2SC1845
Q111	TRANSISTOR	2SC1845
Q113, 115	TRANSISTOR	2SA992
Q117, 119	TRANSISTOR	2SC1845
Q121	TRANSISTOR	2SA1145
Q123	TRANSISTOR	2SC2705
Q125, 127	TRANSISTOR	2SC1845
Q129	TRANSISTOR	2SA992
Q133	TRANSISTOR	2SC2603
Q135	TRANSISTOR	2SC2705
Q137	TRANSISTOR	2SC1845
Q147	TRANSISTOR	2SA1145
Q149	TRANSISTOR	2SC3298
Q151	TRANSISTOR	2SA1306
Q157	N–FET	2SK246
Q159, 161	TRANSISTOR	2SC1845
D101	ZENER DIODE	RD24ESB
D103	DIODE	1SS252
D105	LED (RED)	AEL–437–O
D107	DIODE	1SS252
D109	LED (RED)	AEL–437–O
D111, 113	ZENER DIODE	RD8.2ESB3
D115, 117	DIODE	1SS252
D127, 129	DIODE	1SS252

COILS

L101, 103	BEAD FILTER	ATX1012

CAPACITORS

C101, 103	MICA CAPACITOR	CMA101J500
C105	POLYESTER CAPACITOR	CQMXA222J100
C107, 109	CERAMIC CAPACITOR	CKCYB331K500
C111	ELECTROLYTIC CAPACIT	CEXA221M25
C113, 115	MICA CAPACITOR	CMA680J500
C117	ELECTROLYTIC CAPACIT (470/50)	ACH1059
C119	AUDIO FILM CAPACITOR	CFTXA109J50
C121	MICA CAPACITOR	CMA100D500
C123	ELECTROLYTIC CAPACIT	CEXA221M25
C125, 127	ELECTROLYTIC CAPACIT	CEAS101M100
C129	ELECTR.CAPACITOR	CEAS4R7M50
C131, 133	CERAMIC CAPACITOR	CKDYF223Z50
C135, 137	CERAMIC CAPACITOR	CKDYF223Z50
C139	CERAMIC CAPACITOR	CKCYB471K50
C141, 143	MICA CAPACITOR	CMA680J500
C145	ELECTROLYTIC CAPACIT	CEXA100M50
C147	AUDIO FILM CAPACITOR	CFTXA103J50
C149, 151	CERAMIC CAPACITOR	CCCSL221J50
C153	MYLOR FILM CAPACITOR	CQMA223K250

RESISTORS

	VR101	VR	VRTM6H503
	R101	CARBON FILM RESISTOR	RDR1/4PM221J
	R103	CARBON FILM RESISTOR	RDR1/4PM224J
	R113	CARBON FILM RESISTOR	RDR1/4PM223J
	R115	CARBON FILM RESISTOR	RDR1/4PM681J
⚠	R121	FUSIBLE RESISTOR	RFA1/4PS271J
	R123	CARBON FILM RESISTOR	RDR1/4PM224J
⚠	R125, 127	FUSIBLE RESISTOR	RFA1/4PS331J
	R129, 131	CARBON FILM RESISTOR	RD1/2PM223J
⚠	R133	FUSIBLE RESISTOR	RFA1/4PS271J
⚠	R139	FUSIBLE RESISTOR	RFA1/4PS470J
⚠	R141	FUSIBLE RESISTOR	RFA1/4PS101J
⚠	R143	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠	R145	FUSIBLE RESISTOR	RFA1/4PS821J
⚠	R153	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠	R155	FUSIBLE RESISTOR	RFA1/4PS821J
⚠	R157, 159	FUSIBLE RESISTOR	RFA1/4PS101J
⚠	R161, 163	FUSIBLE RESISTOR	RFA1/4PS101J
⚠	R165, 167	FUSIBLE RESISTOR	RFA1/4PS271J
⚠	R169, 171	FUSIBLE RESISTOR	RFA1/4PS470J
⚠	R173, 175	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠	R177, 189	RESISTOR (0.33, 5W)	ACN1075
⚠	R191, 193	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠	R197	FUSIBLE RESISTOR	RFA1/4PS561J
⚠	R199	FUSIBLE RESISTOR	RFA1/4PS101J
	R201	CARBON FILM RESISTOR	RD1/8PM821J
	R203	CARBON FILM RESISTOR	RDR1/4PM100J
	R205, 207	CARBON FILM RESISTOR	RD1/4PMF392J
		Other resistors	RD1/4PM□□□J

⊙ POWER R ASSEMBLY (AWZ3420)

SEMICONDUCTORS

Q102, 104	TRANSISTOR	2SC1845
Q106	N–DUAL–FET	2SK389NK
Q108, 110	TRANSISTOR	2SC1845
Q112	TRANSISTOR	2SC1845
Q114, 116	TRANSISTOR	2SA992
Q118, 120	TRANSISTOR	2SC1845
Q122	TRANSISTOR	2SA1145
Q124	TRANSISTOR	2SC2705
Q126, 128	TRANSISTOR	2SC1845
Q130	TRANSISTOR	2SA992
Q134	TRANSISTOR	2SC2603
Q136	TRANSISTOR	2SC2705
Q138	TRANSISTOR	2SC1845
Q148	TRANSISTOR	2SA1145
Q150	TRANSISTOR	2SC3298
Q152	TRANSISTOR	2SA1306
Q158	N–FET	2SK246
Q160, 162	TRANSISTOR	2SC1845
D102	ZENER DIODE	RD24ESB
D104	DIODE	1SS252
D106	LED (RED)	AEL–437–O
D108	DIODE	1SS252
D110	LED (RED)	AEL–437–O
D112, 114	ZENER DIODE	RD8.2ESB3
D116, 118	DIODE	1SS252
D128, 130	DIODE	1SS252

COILS

L102, 104	BEAD FILTER	ATX1012

CAPACITORS

C102, 104	MICA CAPACITOR	CMA101J500
C106	POLYESTER CAPACITOR	CQMXA222J100
C108, 110	CERAMIC CAPACITOR	CKCYB331K500
C112	ELECTROLYTIC CAPACIT	CEXA221M25
C114, 116	MICA CAPACITOR	CMA680J500
C118	ELECTROLYTIC CAPACIT (470/50)	ACH1059
C120	AUDIO FILM CAPACITOR	CFTXA103J50
C122	MICA CAPACITOR	CMA100D500
C124	ELECTROLYTIC CAPACIT	CEXA221M25

Mark No.	Description	Parts No.
C126, 128	ELECTROLYTIC CAPACIT	CEAS101M100
C130	ELECTR.CAPACITOR	CEAS4R7M50
C132, 134	CERAMIC CAPACITOR	CKDYF223Z50
C136, 138	CERAMIC CAPACITOR	CKDYF223Z50
C140	CERAMIC CAPACITOR	CKCYB471K50
C142, 144	MICA CAPACITOR	CMA680J500
C146	ELECTROLYTIC CAPACIT	CEXA100M50
C148	AUDIO FILM CAPACITOR	CFTXA103J50
C150, 152	CERAMIC CAPACITOR	CCCSL221J50
C154	MYLOR FILM CAPACITOR	CQMA223K250
RESISTORS		
VR102	VR	VRTM6H503
R102	CARBON FILM RESISTOR	RDR1/4PM221J
R104	CARBON FILM RESISTOR	RDR1/4PM224J
R114	CARBON FILM RESISTOR	RDR1/4PM223J
R116	CARBON FILM RESISTOR	RDR1/4PM681J
⚠ R122	FUSIBLE RESISTOR	RFA1/4PS271J
R124	CARBON FILM RESISTOR	RDR1/4PM224J
⚠ R126, 128	FUSIBLE RESISTOR	RFA1/4PS331J
R130, 132	CARBON FILM RESISTOR	RD1/2PM223J
⚠ R134	FUSIBLE RESISTOR	RFA1/4PS271J
⚠ R140	FUSIBLE RESISTOR	RFA1/4PS470J
⚠ R142	FUSIBLE RESISTOR	RFA1/4PS101J
⚠ R144	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠ R146	FUSIBLE RESISTOR	RFA1/4PS821J
⚠ R154	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠ R156	FUSIBLE RESISTOR	RFA1/4PS821J
⚠ R158, 160	FUSIBLE RESISTOR	RFA1/4PS101J
⚠ R162, 164	FUSIBLE RESISTOR	RFA1/4PS101J
⚠ R166, 168	FUSIBLE RESISTOR	RFA1/4PS271J
⚠ R170, 172	FUSIBLE RESISTOR	RFA1/4PS470J
⚠ R174, 176	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠ R178, 190	RESISTOR (0.33, 5W)	ACN1075
⚠ R192, 194	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠ R198	FUSIBLE RESISTOR	RFA1/4PS561J
⚠ R200	FUSIBLE RESISTOR	RFA1/4PS101J
R202	CARBON FILM RESISTOR	RD1/8PM821J
R204	*CARBON FILM RESISTOR*	*RDR1/4PM100J*
R206, 208	CARBON FILM RESISTOR	RD1/4PMF392J
	Other resistors	RD1/4PM□□□J

Mark No.	Description	Parts No.
⊙ POWER SUPPLY ASSEMBLY (AWZ3425)		
SEMICONDUCTORS		
Q601	TRANSISTOR	2SD1913
Q602, 603	TRANSISTOR	2SB1274
Q605	TRANSISTOR	2SD1913
Q606	TRANSISTOR	2SB1274
Q607	TRANSISTOR	2SD1913
Q608	TRANSISTOR	2SB1274
Q609	TRANSISTOR	2SC1845
Q610	TRANSISTOR	2SA992
Q611	TRANSISTOR	2SD1913
D601, 602	DIODE	1SS252
D603, 604	ZENER DIODE	RD39ESB1
D605, 606	ZENER DIODE	RD24ESB1
D607	ZENER DIODE	RD18ESB
D608–611	DIODE	S5566
D616	DIODE	1SS252
D617–620	ZENER DIODE	RD24ESB1
CAPACITORS		
C601, 602	ELECTR.CAPACITOR	CEAS100M50
C603	ELECTR.CAPACITOR	CEAS470M50
C604–606	ELECTR.CAPACITOR	CEAS101M50
C607, 608	ELECTR.CAPACITOR	CEAS010M50
C609	CERAMIC CAPACITOR	CKCYB471K50
C610	ELECTROLYTIC CAPACIT	CEAS101M63
C611	ELECTR.CAPACITOR	CEAS3R3M50
C613, 614	ELECTR.CAPACITOR	CEAS470M50
⚠ C615	POLYESTER CAPACITOR	CQMXA104J100
⚠ C617, 618	CKA (0.01/AC400V)	ACG1003
C619, 620	ELECTR.CAPACITOR	CEAS100M50
C623, 624	ELECTR.CAPACITOR	CEAS100M50
C625	CERAMIC CAPACITOR	CKCYX473M25
RESISTORS		
⚠ R601, 602	FUSIBLE RESISTOR	RFA1/4PS4R7J
⚠ R605, 606	METAL OXIDE RESISTOR	RS2LMF562J
⚠ R609, 610	FUSIBLE RESISTOR	RFA1/4PS101J
R611	FUSIBLE RESISTOR	RFA1/4PS470J
R613	CARBON FILM RESISTOR	RD1/2PM332J
R614	CARBON FILM RESISTOR	RD1/2PM272J
⚠ R615, 616	CARBON FILM RESISTOR	RD1/4PMF391J
⚠ R617, 618	METAL OXIDE RESISTOR	RS2LMF272J
⚠ R619, 620	FUSIBLE RESISTOR	RFA1/4PS5R6J
R622	CARBON FILM RESISTOR	RD1/2PM103J
	Other resistors	RD1/4PM□□□J

Mark No.	Description	Parts No.
OTHERS		
	SCREW	ABA–298
CN11	CONNECTOR (7P)	KPC7
CN13	CONNECTOR (4P)	KPC4
CN16	CONNECTOR (7P)	KPC7
SPEAKER TERM ASSEMBLY		
RELAIES		
RY901, 902	RELAY	ASR1026
RY903	RELAY	ASR1005
COILS		
L901, 902	COIL	ATH1021
CAPACITORS		
C901–904	AUDIO FILM CAPACITOR	CFTXA104J50
C905–908	AUDIO FILM CAPACITOR	CFTXA223J50
C909–912	POLYESTER CAPACITOR	CQMXA472J100
C913–916	AUDIO FILM CAPACITOR	CFTXA223J50
RESISTORS		
⚠ R901, 902	METAL OXIDE RESISTOR	RS1LMF101J
⚠ R903, 904	METAL OXIDE RESISTOR	RS2LMF331J
⚠ R905, 906	METAL OXIDE RESISTOR	RS1PMF681J
⚠ R907, 908	METAL OXIDE RESISTOR	RS2LMF100J
R909–912	CARBON FILM RESISTOR	RD1/4PM100J
OTHERS		
	SPEAKER TERMINAL 4–P	AKE1017
⊙ PHONO AMP ASSEMBLY (AWZ3434)		
SEMICONDUCTORS		
IC501, 502	OP–AMP–IC	M5220P
Q501–504	N–FET	2SK369
Q505	TRANSISTOR	2SD1913
Q506	TRANSISTOR	2SB1274
Q509, 510	TRANSISTOR	2SC1845
Q511–514	TRANSISTOR	2SC3327
Q515, 516	TRANSISTOR	2SC1845
D505, 506	DIODE	1SS252
D507, 508	DIODE	MA859
D509, 510	ZENER DIODE	RD24ESB1

Mark No.	Description	Parts No.
SWITCHES		
S501	SWITCH	ASU1008
COILS		
L501, 502	COIL	ATH1010
CAPACITORS		
C503, 504	AUDIO FILM CAPACITOR	CFTXA103J50
C505, 506	CERAMIC CAPACITOR	CCCSL181K500
C507, 508	CERAMIC CAPACITOR	CKCYB222K500
C509, 510	ELECTROLYTIC CAPACIT	CEXA470M25
C511, 512	ELECTROLYTIC CAPACIT	CEXA221M25
C513, 514	CAPACITOR	CQPXA224J2A
C517, 518	AUDIO FILM CAPACITOR	CFTXA224J50
C519, 520	AUDIO FILM CAPACITOR	CFTXA563J50
C521, 522	ELECTROLYTIC CAPACIT	CEXA220M25
C523, 524	CERAMIC CAPACITOR	CCDSL390J50
C525	ELECTROLYTIC CAPACIT	CEXA471M25
C526	ELECTROLYTIC CAPACIT	CEXA221M25
C527, 528	ELECTROLYTIC CAPACIT	CEXA220M50
C529, 530	ELECTR.CAPACITOR	CEAS470M50
C531, 532	CERAMIC CAPACITOR	CCCSL271K500
C533, 534	CERAMIC CAPACITOR	CKCYB681K500
C535, 536	CERAMIC CAPACITOR	CCCSL221K500
C537, 538	CERAMIC CAPACITOR	CKCYF103Z50
C539	CERAMIC CAPACITOR	CKDYF103Z50
C541, 542	CAPACITOR	CQPXA333J2A
RESISTORS		
R501–504	CARBON FILM RESISTOR	RDR1/4PM101J
R505, 506	CARBON FILM RESISTOR	RD1/8PM272J
R507, 508	CARBON FILM RESISTOR	RDR1/4PM563J
R527, 528	CARBON FILM RESISTOR	RDR1/4PM6R8F
R529, 530	CARBON FILM RESISTOR	RDR1/4PM820F
R531, 532	CARBON FILM RESISTOR	RDR1/4PM151J
R533, 534	CARBON FILM RESISTOR	RDR1/4PM153F
R535, 536	CARBON FILM *RESISTOR*	RDR1/4PM121J
R537, 538	CARBON FILM RESISTOR	RDR1/4PM152F

Mark No.	Description	Parts No.
R539, 540	CARBON FILM RESISTOR	RDR1/4PM100J
R541, 542	CARBON FILM RESISTOR	RDR1/4PM222F
R543, 544	CARBON FILM RESISTOR	RDR1/4PM101J
R559, 560	CARBON FILM RESISTOR	RDR1/4PM101J
R563, 564	CARBON FILM RESISTOR	RD1/8PM123J
R565, 566	CARBON FILM RESISTOR	RD1/8PM223J
R568	CARBON FILM RESISTOR	RD1/8PM010J
R569	CARBON FILM RESISTOR	RD1/8PM2R2J
	Other resistors	RD1/4PM□□□J
OTHERS		
	PIN JACK (1P)	AKB1027
	PIN JACK (1P)	AKB1028

⊙ VR ASSEMBLY (AWZ3439)

SEMICONDUCTORS

IC252	OP-AMP-IC	M5220P
Q139-142	TRANSISTOR	2SC2458
Q143	TRANSISTOR	2SA1115
Q144	TRANSISTOR	2SC2458
Q145	TRANSISTOR	2SC2235
Q251, 252	TRANSISTOR	2SA992
Q253, 254	TRANSISTOR	2SC1845
D131	ZENER DIODE	RD12ESB
D134	DIODE	1SS252

CAPACITORS

C251, 252	ELECTROLYTIC CAPACIT	CEXA4R7M50
C253, 254	ELECTROLYTIC CAPACIT	CEXA101M25
C255, 256	ELECTROLYTIC CAPACIT	CEXA4R7M50
C257, 258	PL.STYRENE CAPACITOR	CQSA561J50
C261-268	ELECTROLYTIC CAPACIT	CEXA101M25
C269, 270	CERAMIC CAPACITOR	CCCSL470J50
C271, 272	ELECTROLYTIC CAPACIT	CEAS471M6
C273	CERAMIC CAPACITOR	CKDYF103Z50
C274	ELECTR.CAPACITOR	CEAS101M16
C275	ELECTR.CAPACITOR	CEAS010M100

Mark No.	Description	Parts No.
C276	CERAMIC CAPACITOR	CCCSL680K500
C277	CERAMIC CAPACITOR	CCCSL101K500

RESISTORS

VR251	VR	ACW1014
R215, 216	CARBON FILM RESISTOR	RD1/8PM222J
R217	FUSIBLE RESISTOR	RFA1/4PS221J
R221	CARBON FILM RESISTOR	RD1/8PM223J
R222	CARBON FILM RESISTOR	RD1/8PM222J
R231	CARBON FILM RESISTOR	RD1/8PM153J
R281	CARBONFILM RESISTOR	RD1/8PM100J
	Other resistors	RD1/4PM□□□J

OTHERS

CN8	JUMPER CONNECTOR	KPC8

HEAD PHONE ASSEMBLY

CAPACITORS

C951, 952	CERAMIC CAPACITOR	CKCYB392K50

OTHERS

	JACK	AKN1002

DIODE ASSEMBLY

SEMICONDUCTOR

D621	DIODE	PB102F

7. FOR A-777/HE, HB, SD, HEWZ AND A-878/HEZ TYPES

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

CONTRAST OF MISCELLANEOUS PARTS

The A-777/HE, HB, SD, HEWZ and A-878/HEZ types are the same as the A-51/KU type with the exception of the following sections

Mark	Symbol & Description	Part No. A-51/KU type	A-777/HE type	A-777/HB type	A-777/SD type	A-777/HEWZ type	A-878/HEZ type	Remarks
	SPEAKER SWITCH assembly	Non supply	Non supply	Non supply	Non supply	Non supply	Non supply	*1
⊙	TONE AMP assembly	AWZ3444	AWZ3444	AWZ3444	AWZ3444	AWZ3444	AWZ3443	
⊙	POWER SUPPLY assembly	AWZ3425	AWZ3425	AWZ3425	AWZ3425	AWZ3425	AWZ3424	
⊙	PHONO AMP assembly	AWZ3434	AWZ3434	AWZ3434	AWZ3434	AWZ3434	AWZ3433	
⊙	VR assembly	AWZ3439	AWZ3439	AWZ3439	AWZ3439	AWZ3439	AWZ3438	
⊙	POWER L assembly	AWZ3417	AWZ3417	AWZ3417	AWZ3417	AWZ3417	AWZ3416	
⊙	POWER R assembly	AWZ3420	AWZ3420	AWZ3420	AWZ3420	AWZ3420	AWZ3419	
⚠	Q1, Q2, Q5, Q6 Transistor	2SC3182N	2SC3182N	2SC3182N	2SC3182N	2SC3182N	2SC3281	
⚠	Q3, Q4, Q7, Q8 Transistor	2SA1265N	2SA1265N	2SA1265N	2SA1265N	2SA1265N	2SA1302	
⚠	S Voltage selector switch	.....	.....	.....	AKX-507	.....	.....	
	S2 Remote slide rotary switch	ASU1039	ASU1039	ASU1039	ASU1039	ASU1039	ASU1029	
	S3 Remote slide rotary switch	ASU1038	ASU1038	ASU1038	ASU1038	ASU1038	ASU1041	
	S4 Remote slide rotary switch	ASU1026	ASU1026	ASU1026	ASU1026	ASU1026	ASU1040	
⚠	T1 Power transformer	ATS1348	ATS1350	ATS1350	ATS1349	ATS1350	ATS1347	
⚠	T2 Power transformer	ATS1348	ATS1350	ATS1350	ATS1349	ATS1350	ATS1347	
⚠	C1 Electr.capacitor (22000/63)	ACH1193	ACH1193	ACH1193	ACH1193	ACH1193	.....	
⚠	C1 Electr.capacitor (27000/80)	.....	.....	.....	.....	.....	ACH1191	
⚠	C2 Electr.capacitor (27000/80)	.....	.....	.....	.....	.....	ACH1192	
⚠	C3 Polyester capacitor	.....	.....	.....	.....	CQMXA103J100	CQMXA103J100	
⚠	R1 Carbon film resistor	.....	.....	.....	.....	RD1/4PM100J	RD1/4PM100J	
⚠	R2 Carbon film resistor	.....	RD1/4PM010J	RD1/4PM010J	.....	RD1/4PM010J	RD1/4PM010J	
⚠	FU3, FU4 Fuse (4A/125V)	AEK-125	.....	.....	.....	.....	.....	
⚠	FU3, FU4 Fuse (T2A/250V)	.....	AEK-511	.....	.....	AEK-511	AEK-511	
⚠	FU3, FU4 Fuse (2A/125V)	.....	.....	.....	AEK-122	.....	.....	
⚠	FU1, FU2 Fuse (T2A/250V)	.....	.....	AEK-511	.....	.....	.....	
⚠	FU1, FU2 Fuse (2A/125V)	.....	.....	.....	AEK-122	.....	.....	
⚠	AC Power cord	ADG1058	ADG1049	ADG1087	ADG1051	ADG1049	ADG1036	
⚠	AC socket (OUTLET, 3P)	AKP-515	.....	.....	AKP-515	.....	.....	

Mark	Symbol & Description	Part No. A-51/KU type	A-777/HE type	A-777/HB type	A-777/SD type	A-777/HEWZ type	A-878/HEZ type	Remarks
	Strain relief	AEP-113	AEC-882	AEC-882	AEC-882	AEC-882	AEC-882	
	Front panel	ANB1457	ANB1454	ANB1454	ANB1454	ANB1454	ANB1453	
	Panel base	AMB1799	AMB1799	AMB1799	AMB1799	AMB1799	AMB1798	
	Long shaft assembly	ANL1039	ANL1039	ANL1039	ANL1039	ANL1039	ANL1038	
	Pin grommet	.....	.....	.....	.....	.....	AEC1015	
	Metal bonnet	AZN1804	AZN1804	AZN1804	AZN1804	AZN1804	ANE1295	
	Screw	.....	.....	.....	.....	.....	B8Z40P140FZK	
	Nut	.....	.....	.....	.....	.....	NK70FUC	
	Washer	.....	.....	.....	.....	.....	WG70FUC	
	Packing case	AHD2068	AHD2067	AHD2067	AHD2067	AHD2067	AHD2066	
	Styrol protector	AHA1070	AHA1070	AHA1070	AHA1070	AHA1070	.....	
	Top pad	.....	.....	.....	.....	.....	AHA1246	
	Bottom pad	.....	.....	.....	.....	.....	AHA1247	
	Operating instructions (English, Spanish)	ARE1204	.....	ARE1204	ARE1204	.....	.....	
	Operating instructions (English, French, German, Italian, Dutch, Swedish, Spanish, Portuguese)	.....	ARE1194	.....	.....	.....	ARE1193	
	Operating instructions (German)	.....	.....	.....	.....	ARC1268	.....	

*1 : The SPEAKER SWITCH assemblies of A-51/KU, A-777/HE, HB, SD and HEWZ types are the same.

⊙ TONE AMP assembly (AWZ3443)

The TONE AMP assembly (AWZ3443) is the same as the TONE AMP assembly (AWZ3444) with the exception of the following sections.

Mark	Symbol & Description	Part No. AWZ3444	AWZ3443	Remarks
	D301	AEL1004	.....	
	D304	AEL1065	.....	
	D351	.....	AEL1065	
	D352	.....	AEL1004	
	S304	ASG-703	.....	
	S351	.....	ASG-703	
	C301, C302	CEAS2R2M50	CEANL2R2M50	
	C344	.....	CKCYB392K50	
	R345, R346	RD1/4PM122J	RD1/4PM361J	
	R347, R348	RD1/4PM680J	RD1/4PM221J	

⊙ PHONO AMP assembly (AWZ3433)

The PHONO AMP assembly (AWZ3433) is the same as the PHONO AMP assembly (AWZ3434) with the exception of the following sections.

Mark	Symbol & Description	Part No. AWZ3434	AWZ3433	Remarks
	R509, R510, R551, R552	RD1/4PM102J	RDR1/4PM102J	
	R511, R512	RD1/4PM750J	RDR1/4PM750J	
	R515, R516, R519, R520	RD1/4PM472J	RDR1/4PM472J	
	R521, R522	RD1/4PM680J	RDR1/4PM680J	
	R523, R524	RD1/4PM153J	RDR1/4PM153J	
	R525, R526	RD1/4PM334J	RDR1/4PM334J	
	R547, R548	RD1/4PM393J	RDR1/4PM393J	
	R549, R550	RD1/4PM184J	RDR1/4PM184J	
	R551, R552	RD1/4PM102J	RDR1/4PM102J	
	R553, R554	RD1/4PM222J	RDR1/4PM222J	
	R555, R556	RD1/4PM333J	RDR1/4PM333J	
	R557, R558	RD1/4PM331J	RDR1/4PM331J	
	R571, R572	RD1/4PM103J	RDR1/4PM103J	

⊙ VR assembly (AWZ3438)

The VR assembly (AWZ3438) is the same as the VR assembly (AWZ3439) with the exception of the following sections.

Mark	Symbol & Description	Part No. AWZ3439	AWZ3438	Remarks
	C276	CCCSL680K500	CMA820J500	
	C277	CCCSL101K500	CMA680J500	
	C278-C280	.....	CKCYF472Z500	
	VR251	ACW1014	ACW1013	
	R251-R254	RD1/4PM104J	RDR1/4PM104J	
	R255, R256, R261, R262, R271, R272, R279, R280	RD1/4PM101J	RDR1/4PM101J	
	R257-R260	RD1/4PM472J	RDR1/4PM472J	
	R263, R264	RD1/4PM823J	RDR1/4PM104J	
	R265, R266	RD1/4PM271J	RDR1/4PM271J	
	R267, R268	RD1/4PM122J	RDR1/4PM122J	
	R273, R274	RD1/4PM112J	RDR1/4PM102J	
	R275, R276	RD1/4PM123J	RDR1/4PM123J	
	R277, R278	RD1/4PM272J	RDR1/4PM272J	

⊙ POWER L assembly (AWZ3416)

The POWER L assembly (AWZ3416) is the same as the POWER L assembly (AWZ3417) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3417	AWZ3416	
	D111, D113	RD8.2ESB3	RD9.1ESB3	
	C105	CQMXA222J100	CQSXA222J160	
	C125, C127	CEAS101M100	CEXA101M2A	
	C139	CKCYB471K50	CQSXA471J160	
	R101	RDR1/4PM221J	RDR1/2PM221J	
	R103	RDR1/4PM224J	RDR1/2PM224J	
	R109	RD1/4PM100J	RDR1/4PM680J	
	R111	RD1/4PM431J	RDR1/4PM431J	
	R113	RDR1/4PM223J	RDR1/2PM223J	
	R115	RDR1/4PM681J	RDR1/2PM681J	
	R117	RD1/4PM684J	RDR1/4PM684J	
	R119, R183	RD1/4PM561J	RDR1/4PM561J	
	R135	RD1/4PM512J	RDR1/4PM512J	
	R137	RD1/4PM222J	RDR1/4PM222J	
	R149	RD1/4PM512J	RDR1/4PM512J	
	R179, R187	RD1/4PM473J	RDR1/4PM473J	
	R181	RD1/4PM101J	RDR1/4PM101J	
	R185	RD1/4PM562J	RDR1/4PM562J	
	R195	RD1/4PM100J	RDR1/4PM100J	
	R201	RD1/8PM821J	RD1/8PU821J	
	R211	RD1/4PM153J	RDR1/4PM153J	
	R213	RD1/4PM103J	RDR1/4PM103J	

⊙ POWER SUPPLY assembly (AWZ3424)

The POWER SUPPLY assembly (AWZ3424) is the same as the POWER SUPPLY assembly (AWZ3425) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3425	AWZ3424	
	R611	RFA1/4PS470J	.....	
	R614	RD1/2PM272J	RD1/2PM332J	

⊙ POWER R assembly (AWZ3419)

The POWER R assembly (AWZ3419) is the same as the POWER R assembly (AWZ3420) with the exception of the following sections.

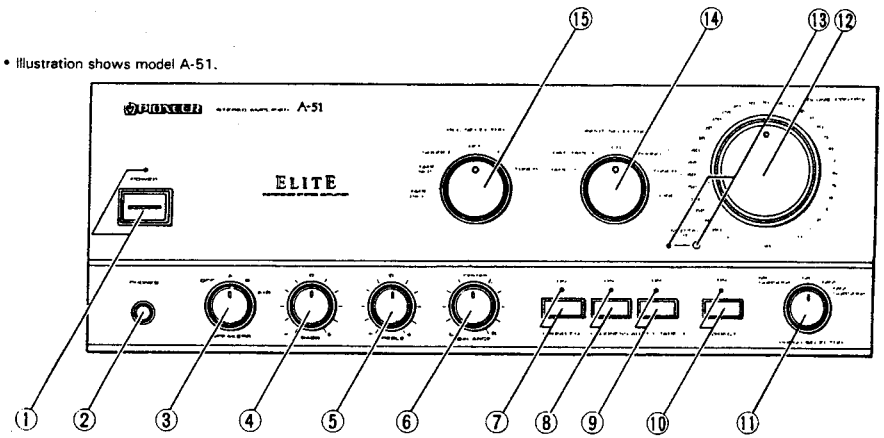
Mark	Symbol & Description	Part No.		Remarks
		AWZ3420	AWZ3419	
	D112, D114	RD8.2ESB3	RD9.1ESB3	
	C106	CQMXA222J100	CQSXA222J160	
	C126, C128	CEAS101M100	CEXA101M2A	
	C140	CKCYB471K50	CQSXA471J160	
	R102	RDR1/4PM221J	RDR1/2PM221J	
	R104	RDR1/4PM224J	RDR1/2PM224J	
	R110	RD1/4PM100J	RDR1/4PM680J	
	R112	RD1/4PM431J	RDR1/4PM431J	
	R114	RDR1/4PM223J	RDR1/2PM223J	
	R116	RDR1/4PM681J	RDR1/2PM681J	
	R118	RD1/4PM684J	RDR1/4PM684J	
	R120, R184	RD1/4PM561J	RDR1/4PM561J	
	R136	RD1/4PM512J	RDR1/4PM512J	
	R138	RD1/4PM222J	RDR1/4PM222J	
	R150	RD1/4PM512J	RDR1/4PM512J	
	R180, R188	RD1/4PM473J	RDR1/4PM473J	
	R182	RD1/4PM101J	RDR1/4PM101J	
	R186	RD1/4PM562J	RDR1/4PM562J	
	R196	RD1/4PM100J	RDR1/4PM100J	
	R202	RD1/8PM821J	RD1/8PU821J	
	R212	RD1/4PM153J	RDR1/4PM153J	
	R214	RD1/4PM103J	RDR1/4PM103J	

SPEAKER SWITCH assembly (A−878/HEZ type)

The SPEAKER SWITCH assembly (A−878/HEZ type) is the same as the SPEAKER SWITCH assembly (A−51/KU type) for service supply parts.

8. PANEL FACILITIES

• Illustration shows model A-51.



① POWER switch/indicator

Press to turn power to the unit ON and OFF.
When the power is ON, the indicator lights.

② PHONES jack

When using headphones, insert the plug into this jack.

③ SPEAKERS selector switch

Use this switch to listen to the speaker systems connected to SPEAKERS terminals.

OFF:

Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

A:

For reproduction of sound with the speaker system connected to the SPEAKERS A terminals.

B:

For reproduction of sound with the speaker system connected to the SPEAKERS B terminals.

A + B:

For reproduction of sound with the speaker systems connected to SPEAKERS A and B terminals.

④ BASS tone control

Use to adjust the low-frequency tone at low volume level. The center position is the flat (normal) position. When turned to the right, low-frequency tones are emphasized; when turned to the left, low-frequency tones are de-emphasized.

NOTE:

- *This function does not operate when the DIRECT button is in the ON position.*
- *At volume levels lower than "32," the set tone control effect is obtained.*
- *At volume levels higher than "32," the effect becomes increasingly weaker.*

⑤ TREBLE tone control

Use to adjust the high-frequency tone at low volume level. The center position is the flat (normal) position. When turned to the right, high-frequency tones are emphasized; when turned to the left, high-frequency tones are de-emphasized.

NOTE:

- *This function does not operate when the DIRECT button is in the ON position.*
- *At volume levels lower than "32," the set tone control effect is obtained.*
- *At volume levels higher than "32," the effect becomes increasingly weaker.*

⑥ BALANCE control

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the LEFT position and if the left side is louder, turn toward the RIGHT position.

NOTE:

This function does not operate when the DIRECT button is in the ON position.

⑦ PHONO EQ button/indicator

When not using a phono input, turn the phono equalizer power circuit off in order to prevent it from collecting noise during playback of other sources.

ON:

The indicator lights: Always set to this position when using a phono input. Immediately after turning ON, audio signal will be muted for several seconds until circuit operation becomes stable.

OFF:

The indicator goes off: Set to this position when not using a phono input.

⑧ LOUDNESS button/indicator

Use when listening at low volume levels.

ON:

The indicator lights: Boosts low and high frequencies to give added punch to playback at low volume.

OFF:

The indicator goes off: Should normally be left in this position.

NOTE:

This button does not operate when the DIRECT button is in the ON position.

⑨ ADPT 1/TAPE 3 button/indicator

Use this button to listen to tape playback, or to monitor a tape recording.

ON:

The indicator lights: Press when listening to the playback sound of the cassette deck or the adaptor connected to the ADPT 1/TAPE 3 IN/PLAY jacks, or to monitor the sound being recorded on the cassette deck connected to the ADPT 1/TAPE 3 OUT/REC jacks.

OFF:

The indicator goes off: Normally leave the button in this position.

NOTE:

When the DIRECT button is set to ON, this function does not operate and no signal is output at the ADPT 1/TAPE 3 OUT/REC jacks.

⑩ DIRECT button/indicator

Use this button when you wish to bypass the various frequency adjusting circuits and adaptor jacks (ADPT 1/TAPE 3, ADPT 2, BASS, TREBLE, BALANCE, LOUDNESS).

ON:

When this button is in this position, the indicator lights and the signals input from the input jacks are reproduced without passing through the various frequency-adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

OFF:

When the button is in this position the indicator goes out and the signal passes through the various frequency adjusting circuits.

⑪ PHONO SELECTOR switch

Set in accordance with the type of cartridge used in your turntable.

MM:

Set to this position when using a moving magnet cartridge, or a MC (moving coil) cartridge with high output of 1 mV or more.

MC:

Set to this position when using a moving coil cartridge.

MM SUBSONIC/MC SUBSONIC:

Subsonic filter for moving coil or moving magnet cartridges to cut ultralow frequency noise less than 17 Hz generated when playing a warped record.

When using a high-output moving coil cartridge, set this switch to MM or MM SUBSONIC.

⑫ VOLUME CONTROL

Use to adjust volume level.

NOTE:

This unit is equipped with a circuit that attenuates the effect of tone and loudness controls as volume is turned up.

⑬ MUTING button/indicator

Use to temporarily cut sound volume.

ON:

The indicator lights. The sound volume will be cut off.

OFF:

The indicator goes off. The sound will return to its previous volume.

⑭ INPUT SELECTOR switch

Use to select playback source.

LINE:

Set to this position when listening to the programs from a component connected to the LINE jacks.

TUNER:

Set to this position when listening to AM or FM broadcasts with a tuner.

PHONO:

Set to this position when listening to record playback on a turntable.

CD:

Set to this position when listening to a compact disc playback with a CD player.

DAT/TAPE 1:

For playback with a cassette deck or digital audio tape deck connected to the DAT/TAPE 1 jacks.

TAPE 2:

For playback with a cassette deck connected to the TAPE 2 jacks.

⑮ REC SELECTOR switch

Switch to select recording signal. When set at other positions than SOURCE or OFF, signals can be recorded during playback of the equipment selected by INPUT SELECTOR switch.

TUNER:

To record from a TUNER.

CD:

To record from a CD player.

OFF:

In this position nothing from the REC jacks of DAT/TAPE 1 and TAPE 2 will be output. Select it when not recording; output to cassette decks will be disconnected, improving sound quality.

SOURCE:

To record the equipment selected by INPUT SELECTOR switch.

TAPE:

1 ► 2

To record (copy) from the cassette deck of DAT/TAPE 1 jacks, over to the cassette deck of TAPE 2 jacks.

2 ► 1

To record (copy) from the cassette deck of TAPE 2 jacks, over to the cassette deck of DAT/TAPE 1 jacks.

NOTE:

The REC SELECTOR switch has no effect on the recording output of the ADPT 1/TAPE 3 jacks.

9. ADJUSTMENTS

■ IDLE CURRENT ADJUSTMENT

1. Set the VOLUME CONTROL to minimum.
2. Set the POWER switch to ON.
3. Adjust VR101 (VR102) so that the voltage between OP and BB (AA) becomes $11^{+4.4}_{-3.3}$ mV.

NOTE :
After tuning on the power, wait at least 30 minutes before adjustment.

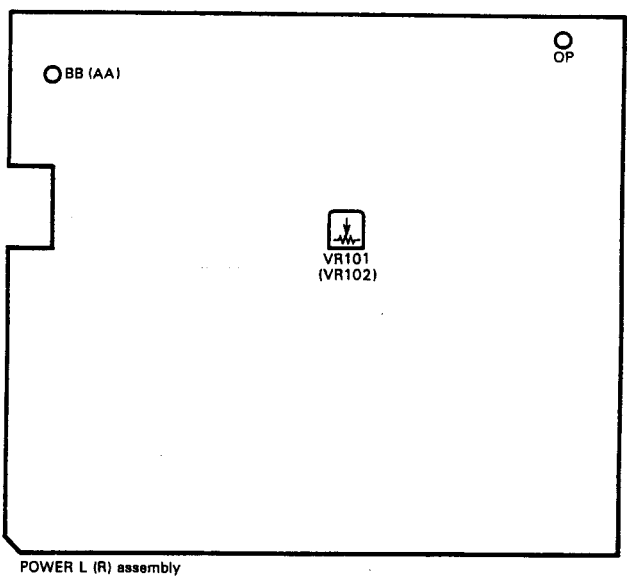


Fig. 1 Adjustment point